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# MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL  
RAILROAD AND FINANCIAL NEWSPAPER.

## AMERICAN RAILROAD PROGRESS.

[London Statist.]

In this journal we have during the past few years been directing the attention of our readers to the marvelous results which the American railroad companies have attained in the way of reducing operating expenses by increasing trainloads, and we are glad to say that at home, as well as in the colonies and in India, our labors are being rewarded by the efforts of the railway companies in all three to imitate the example set them in the United States. We see no reason to suppose that the movement even in the United States has attained its extreme limit. On the contrary, we think it probable that the Americans will go farther in the course they have adopted. Furthermore, we do not doubt that the American railroad companies will introduce changes in administration and organization which will materially reduce working costs. And we feel certain that there is much to be done at the ports which will have a similar effect. Lastly, we see no reason to doubt that the cost of production can be reduced. Over and above this, it is to be recollected that during the past few years the American railroad companies and the great capitalists connected with them have entered upon a new development which is likely to have far-reaching results.

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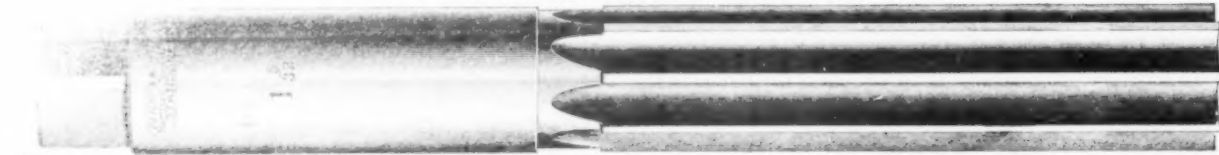
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VOL. XLIV.  
No. 6

Baltimore, August 27, 1903.

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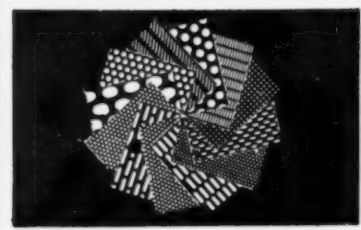


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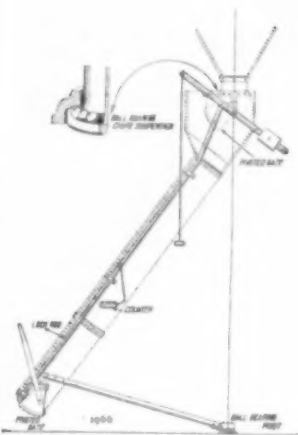
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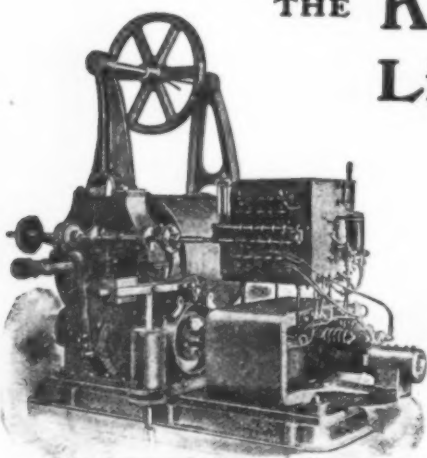
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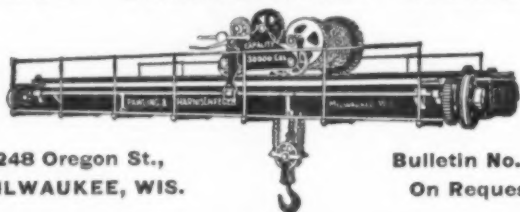
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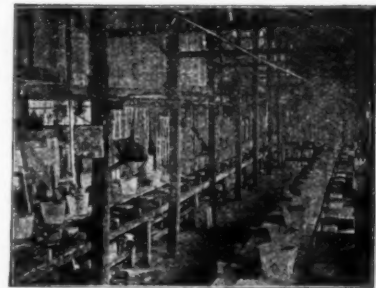
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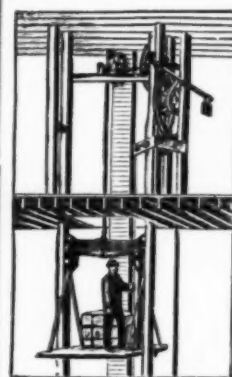
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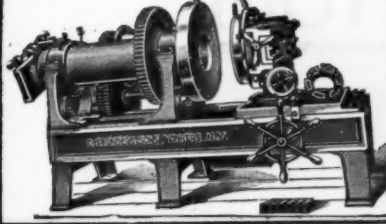


## Classified Index of Articles Advertised

FOR ALPHABETICAL  
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**Knitting Machinery.**  
Campbell & Clute Machine Co., Cohoes, N. Y.  
Mayo Knit. Mch. & Needle Co., Franklin Falls, N. H.  
McMichael & Wildman Mfg. Co., Norristown, Pa.  
Nye & Treddick Co., Philadelphia, Pa.  
Ruth Auto. Knitting Machine Co., York, Pa.  
Scott & Williams, Philadelphia, Pa.  
**Lamps.** (Arc and Incandescent.)  
Alexander, Jr., Co., S. E. Charlotte, N. C.  
Electrical Material Co., Baltimore, Md.  
Electric Supply Co., Savannah, Ga.  
General Electric Co., Schenectady, N. Y.  
Kentucky Electrical Co., Owensboro, Ky.  
New York & Ohio Co., Warren, O.  
Piedmont Electric Co., Asheville, N. C.  
Shelby Electric Co., Shelby, O.  
Standard Electric Co., Norfolk, Va.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.  
**Lamp Adjuster.** (Incandescent.)  
Incandescent Elec. Lgt. Manipulator Co., Boston, Mass.  
**Lamp Replacer.** (Incandescent.)  
Incandescent Elec. Lgt. Manipulator Co., Boston, Mass.  
**Lamp Shades & Guards.** (Incandescent.)  
Incandescent Elec. Lgt. Manipulator Co., Boston, Mass.  
**Leads.**  
Abbott, F. C. & Co., Charlotte, N. C.  
Brobston, Fendick & Co., Brunswick, Ga.  
Clark, Chas. E., Augusta, Ga.  
Martin & Bro., Augusta, Ga.  
Richards, M. V., Lead & Industrial Agt., Wash., D. C.  
Sutherland, Howard, Land Agent, Elkins, W. Va.  
Southern Pacific, Houston, Tex.  
Watson, R. E., Atlanta, Ga.  
**Lathe.** (Engine.)  
Baird Mch. Co., Pittsburg, Pa.  
Hargreaves, W. F., & J. Co., Rockford, Ill.  
Gibbs, W. H. & Co., Pittsburg, Pa.  
Robinson, W. C. & Son, Co., Baltimore, Md.  
McCabe, J. J., New York, N. Y.  
Savannah Loco. Works & Supply Co., Savannah, Ga.  
Schumacher & Boye, Cincinnati, O.  
Walke, Henry, Co., Norfolk, Va.  
**Laundry Machinery.**  
Adams Laundry Machinery Co., Troy, N. Y.  
Dawson, A. L., & Co., Chicago, Ill.  
Stclair Co., S. H., Chicago, Ill.  
Wilson Laundry Machinery Co., Columbia, Pa.  
**Lead.** (Sheet.)  
Robertson Mfg. Co., James, Baltimore, Md.  
**Lead and Tin.** (Pig.)  
Hertz, Theo., Metal Co., St. Louis, Mo.  
Ryan & Co., J. J., Chicago, Ill.  
**Letters.** (Pattern.)  
Brin, A. W., Seneca Falls, N. Y.  
**Lime.**  
Carolina Portland Cement Co., Charleston, S. C.  
Maryland Lime Co., Baltimore, Md.  
Warner, Charles Co., Wilmington Del.  
**Locomotive Builders.**  
American Locomotive Co., New York, N. Y.  
Baldwin Locomotive Works, Philadelphia, Pa.  
Byers, Jno. F., Mch. Co., Ravenna, O.  
Climax Mfg. Co., Corry, Pa.  
Low, Edgar S., Co., Pittsburg, Pa.  
Males Co., Cincinnati, O.  
Porter, H. K., Co., Pittsburg, Pa.  
**Loom Harness.**  
American Supply Co., Providence, R. I.  
**Looms and Weaving Machinery.**  
American Supply Co., Providence, R. I.  
Draper Co., Hopedale, Mass.  
Fairmount Machine Co., Philadelphia, Pa.  
Elburn, Lincoln & Co., Fall River, Mass.  
Lowell Machine Shop, Boston, Mass.  
Mason Machine Works, Taunton, Mass.  
Tompkins, D. A., Co., Charlotte, N. C.  
**Lubricating Compounds.**  
Gatena Signal Oil Co., Galena, Pa.  
Robinson, Wm. C. & Sons Co., Baltimore, Md.  
Cook's, Adam, Sons, New York, N. Y.  
**Lubricators and Oil Cans.**  
Cook's Sons, Adam, New York, N. Y.  
Crosby Steam Gage & Valve Co., Boston, Mass.  
Detroit Lubricator Co., Detroit, Mich.  
Lunkenheimer Co., Cincinnati, O.  
Penberthy Injector Co., Detroit, Mich.  
**Lumber.**  
Kirby Lumber Co., Houston, Tex.  
Price & Heald, Baltimore, Md.  
Red Cypress Lumber Co., Macon, Ga.  
Stetson Lumber Co., Macon, Ga.  
**Machinery.** (Special.)  
Eclipse Mch. Co., Chicago, Ill.  
Leffer, Charles, & Co., Brooklyn, N. Y.  
Moshannon Mfg. Co., Philadelphia, Pa.  
Bayerford Foundry & Machine Co., Bayer, sford, Pa.  
**Machinery and Tools.** (New & Second-hand.)  
Affleck, Geo. E., New York, N. Y.  
American, Chicago, Ill.  
American Elec. Supply & Mfg. Co., New York, N. Y.  
Armstrong, R. S., & Bro., Atlanta, Ga.  
Baird Machine Co., Pittsburg, Pa.  
Baker, H. C., & Co., Philadelphia, Pa.  
Bennett, G. L., New York, N. Y.  
Bissell, F., Co., Toledo, O.  
Bowen & Street Equipment Co., Norfolk, Va.  
Braden, Jas. S., New York, N. Y.  
Brown & Zortman Machinery Co., Pittsburg, Pa.  
Caine & Platt, Philadelphia, Pa.  
Carlin Mch. & Supply Co., Allegheny, Pa.  
Casey, D. L., Mch. Co., Springfield, O.  
Chicago House Wrecking Co., Chicago, Ill.  
Cleveland Belting & Machinery Co., Cleveland, O.  
Clyde Mch. Works, Chicago, Ill.  
Columbia Supply Co., Columbia, S. C.  
Columbus Iron & Steel Co., Columbus, O.  
Contractors' Equipment Co., Philadelphia, Pa.  
Contractors' Supply Co., Pittsburg, Pa.  
Contractors' Supply & Equipment Co., Chicago, Ill.  
Cox, Justice, Jr., & Co., Ltd., Philadelphia, Pa.  
Davis, W. F., Birmingham, Ala.  
Driscoll, John T., & Co., Chicago, Ill.  
Ellis, J. L., Co., Oklahoma City, Okla.  
Fidelity Machine & Metal Co., Philadelphia, Pa.  
Girard Machine & Tool Co., Philadelphia, Pa.  
Hanley, Wm., Bradford, Pa.  
Hartfelder-Garbutt Co., Savannah, Ga.  
Hittner, H. A., Sons, Philadelphia, Pa.  
Huntington Machinery & Supply Co., Wilkesbarre, Pa.  
Kaiser, A. V., & Co., Philadelphia, Pa.  
Kennedy, L. E., & Co., New York, N. Y.  
Kohn, J. W., & Co., Cleveland, O.  
Lehman, Charles T., Birmingham, Ala.  
Lodge & Shipley Mch. Tool Co., Cincinnati, Ohio.  
Lucas, J. C. M., Baltimore, Md.  
Mallory, J. D., Baltimore, Md.  
Mengel's Machinery Exchange, Baltimore, Md.  
Moullner & Co., Philadelphia, Pa.  
Price Machinery Co., Chicago, Ill.  
Ressler, MacGovern & Co., New York, N. Y.  
Baxton, J. C., New York, N. Y.  
Seyfert's, L. F., Sons, Philadelphia, Pa.  
Shaw, Willis, Chicago, Ill.  
Stewart, John A., Electric Co., Cincinnati, O.  
Straub Machinery Co., Cincinnati, O.  
Thompson, Son & Co., New York, N. Y.  
Toomey, Frank, Philadelphia, Pa.  
Valdosta Foundry & Machine Co., Valdosta, Ga.  
Waters, John A., & Co., Richmond, Va.  
Wickes Bros., Pittsburg, Pa.  
Wolf, L., & Bro., Cincinnati, O.  
Wood & Co., Chicago, Ill.  
**Machine Tools.**  
Baird Mch. Co., Pittsburg, Pa.  
Hargreaves, W. F., & J. Co., Rockford, Ill.  
Bickford Drill & Tool Co., Cincinnati, O.  
Cincinnati Milling Machine Co., Cincinnati, O.  
Fosdick Mch. Tool Co., Cincinnati, O.  
Greaves, Klusman & Co., Cincinnati, O.  
Landis Tool Co., Waynesboro, Pa.  
McCabe, J. J., New York, N. Y.  
Frank & Whitney, Hartford, Conn.  
Savannah Loco. Works & Supply Co., Savannah, Ga.  
Schumacher & Boye, Cincinnati, O.  
Walke, Henry, Co., Norfolk, Va.

**Mail Chutes.**  
Oster Mfg. Co., Rochester, N. Y.  
**Mattresses.**  
Perfection Mattress Co., Birmingham, Ala.  
**Mechanical Draft.**  
Allington & Curtis, Saginaw, Mich.  
American Blower Co., Detroit, Mich.  
Andrews & Johnson Co., Chicago, Ill.  
Boston Blower Co., Hyde Park, Mass.  
Dixie Mfg. Co., Baltimore, Md.  
Sturtevant, B. F., Co., Boston, Mass.  
**Mercantile Agencies.**  
International Mercantile Agency, New York, N. Y.  
**Merry-go-Rounds.**  
Herschell-Spillman & Co., North Tonawanda, N. Y.  
McIntire, F. C., & Co., Charlotte, N. C.  
Norman & Evans, Lockport, N. Y.  
**Metal-Working Machinery.**  
Baird Mch. Co., Pittsburg, Pa.  
Barnes, W. F., & J. Co., Rockford, Ill.  
Bertch & Co., Cambridge City, Ind.  
Bickford Drill & Tool Co., Cincinnati, O.  
Cincinnati Milling Machine, Cincinnati, O.  
Fosdick Machine Tool Co., Cincinnati, O.  
Gibbs, W. H. & Co., Columbia, S. C.  
Greaves, Klusman & Co., Cincinnati, O.  
Landis Tool Co., Waynesboro, Pa.  
McCabe, J. J., New York, N. Y.  
Niagara Machine & Tool Works, Niagara Falls, N. Y.  
Patt & Whitney, Hartford, Conn.  
Robinson, J. M., Mfg. Co., Cincinnati, O.  
Roversford Foundry & Machine Co., Roversford, Pa.  
Savannah Loco. Works & Supply Co., Savannah, Ga.  
Schumacher & Boye, Cincinnati, O.  
Walke, Henry, Co., Norfolk, Va.  
Whitton Machine Co., D. E., New London, Conn.  
**Meters.** (Gas.)  
Pittsburg Meter Co., E. Pittsburg, Pa.  
**Meters.** (Water.)  
Pittsburg Meter Co., E. Pittsburg, Pa.  
Worthington, Henry E., New York, N. Y.  
**Mill Engineers and Architects.**  
Collier & Brown, Atlanta, Ga.  
Dyer, D. H., & Son, Fall River, Mass.  
Makpease, C. E., & Co., Providence, R. I.  
Pray, C. M., & Co., Providence, R. I.  
Shaw, Fred, G., Augusta, Ga.  
Tompkins, D. A., Co., Charlotte, N. C.  
Whaley, W. B. Smith & Co., Columbia, S. C.  
Wheeler & Runge, Charlotte, N. C.  
**Milling Machines.**  
Baird Mch. Co., Pittsburg, Pa.  
Cincinnati Milling Machine Co., Cincinnati, O.  
Fosdick Machine Tool Co., Cincinnati, O.  
Walke, Henry, Co., Norfolk, Va.  
**Mill Scales.**  
Alexander, S. B., Jr., Co., Charlotte, N. C.  
Baird Mch. Co., Pittsburg, Pa.  
Case Mfg. Co., Columbus, O.  
Columbia Supply Co., Columbia, S. C.  
Gainesville Iron Works, Gainesville, Ga.  
Greenwald Co., I. & E., Cincinnati, O.  
Hartfelder-Garbutt Co., Savannah, Ga.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
Maxfield, H. E., & Co., New York, N. Y.  
Mecklenburg Iron Works, Charlotte, N. C.  
Miller Oil & Supply Co., Indianapolis, Ind.  
Simmons, John, Co., New York City.  
Smith-Courtney Co., Richmond, Va.  
**Mineral Water.**  
Aldrich, F. E., Baltimore, Md.  
**Mineral Wool.**  
U. S. Mineral Wool Co., New York, N. Y.  
**Mining Machinery.** (Gold, Copper, Slate, etc.)  
Bartlett C. O., & Snow Co., Cleveland, O.  
Crescent Co., Geo. V., New York, N. Y.  
Flory, S., Mfg. Co., Bangor, Pa.  
Ingersoll-Sergeant Drill Co., New York, N. Y.  
Jeffrey Mfg. Co., Columbus, O.  
McLennan-Stone Machine Co., Hollidaysburg, Pa.  
Mecklenburg Iron Works, Charlotte, N. C.  
Northern Electric Mfg. Co., Madison, Wis.  
Rawson & Morrison Mfg. Co., Cambridge, Boston, Mass.  
**Mixing Machinery.**  
Bartlett, C. O., & Snow Co., Cleveland, O.  
Drake Standard Mch. Wks., Chicago, Ill.  
Dunning, W. D., Syracuse, N. Y.  
Ransome Concrete Machinery Co., New York, N. Y.  
Walker & Elliott, Wilmington, Del.  
**Mortar Colors.**  
Chattanooga Paint Co., Chattanooga, Tenn.  
French, Samuel H., & Co., Philadelphia, Pa.  
**Nails.** (Cut.)  
Old Dominion Iron & Nail Works Co., Richmond, Va.  
**Nails.** (Wire.)  
Ludlow-Saylor Wire Co., The, St. Louis, Mo.  
**Oats Cleaner.** (AUTOMATIC.)  
Kasper Oats Cleaner Co., Chicago, Ill.  
**Office Fixtures.**  
Dearborn Desk Co., Birmingham, Ala.  
Hummel, M. L., & Son, Baltimore, Md.  
Wisconsin Iron & Wire Works, Milwaukee, Wis.  
**Oil.**  
Cook's, Adam, Sons, New York, N. Y.  
Bird, W. M., & Co., Charleston, S. C.  
Galena-Signal Oil Co., Franklin, Pa.  
Ironides Co., Columbus, O.  
Miller Oil & Supply Co., Indianapolis, Ind.  
Robinson, Wm. C. & Sons, Baltimore, Md.  
**Oil-Burning Appliances.**  
Petroleum Iron Works Co., Washington, Pa.  
Rockwell Engineering Co., New York, N. Y.  
**Oilers.**  
Gem Mfg. Co., Pittsburg, Pa.  
Ironides Co., Columbus, O.  
Lunkenheimer Co., Cincinnati, O.  
**Organizers and Developers.**  
MacAfee, John Blair, Philadelphia, Pa.  
Mechanics' Electric Co., Boston, Mass.  
Railways & Light Co., Baltimore, Md.  
Rindon, H. C., Washington, D. C.  
Rutter, C. H., Easton, Pa.  
Zell, Robt. Ross, Birmingham, Ala.  
**Packing.**  
Baltimore Engine Co., Baltimore, Md.  
Boston Belting Co., Boston, Mass.  
Broderick & Bascom Rope Co., St. Louis, Mo.  
Jenkins Bros., New York, N. Y.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peelers Rubber Mfg. Co., New York, N. Y.  
Pennsylvania Rubber Co., New York, N. Y.  
Voorhees Rubber Mfg. Co., Jersey City, N. J.  
**Paint.** (Cold Water.)  
Bird, J. A., & W., Co., Boston, Mass.  
Columbia Belting Co., New York, N. Y.  
Fox, M. Ewing, & Co., New York, N. Y.  
Hook, F. E., Hudson, Mich.  
**Paint.** (Booting, etc.)  
Armstrong Mfg. Co., The, Richmond, Va.  
Barrett Mfg. Co., Philadelphia, Pa.  
Bird, W. M., & Co., Charleston, S. C.  
Buchanan-Foster Co., Philadelphia, Pa.  
Chattanooga Paint Co., Chattanooga, Tenn.  
Detroit Graphite Mfg. Co., Detroit, Mich.  
Dixon Crucible Co., Joseph, Jersey City, N. J.  
Eastern Granite Roofing Co., New York, N. Y.  
French, Samuel H., & Co., Philadelphia, Pa.  
Ironides Co., Columbus, O.  
Simmons, John, Co., New York, N. Y.  
Standard Paint Co., New York, N. Y.  
Wisconsin Graphite Co., Pittsburg, Pa.  
**Painting Machinery.**  
Hook, F. E., Hudson, Mich.  
Star Works Co., The, Chicago, Ill.  
**Paper.** (Booting, Building, Sheathing, etc.)  
Armstrong Mfg. Co., The, Richmond, Va.  
Barrett Mfg. Co., Philadelphia, Pa.  
Buchanan-Foster Co., Philadelphia, Pa.  
Eastern Granite Roofing Co., New York, N. Y.  
Garrett, C. S., & Son, Co., Philadelphia, Pa.  
National Roofing & Supply Co., Louisville, Ky.  
Standard Paint Co., The, New York, N. Y.

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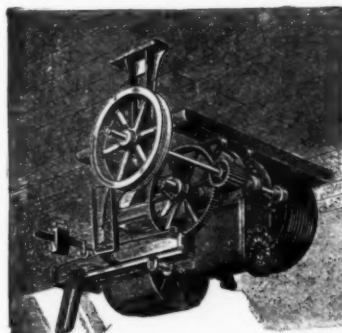
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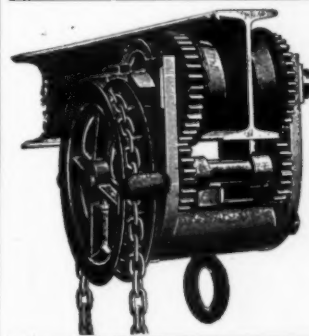


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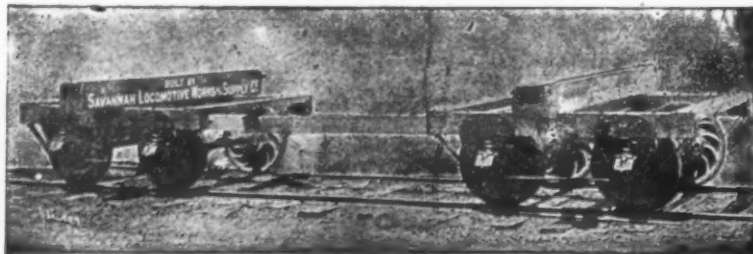
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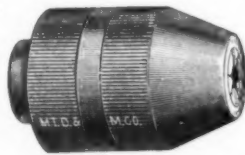
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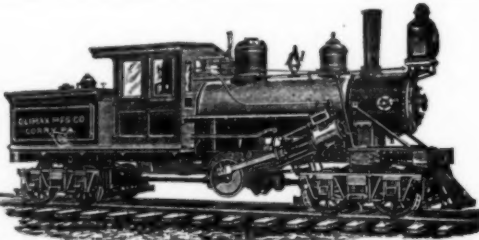
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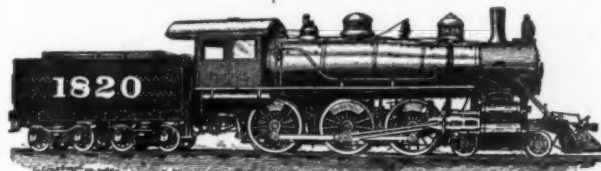
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**Paper.** (Sand, Emery.)  
Besser, Adamson & Co., Philadelphia, Pa.  
**Pneumatics.**  
Adams, J. M., Baltimore, Md.  
Smith, J. Summerfield, & Co., Baltimore, Md.  
**Paste.** (Graphite Pipe Joint.)  
Wisconsin Graphite Co., Pittsburg, Pa.  
**Patent Makers' Machinery.**  
Pay, J. A. & Egan Co., Cincinnati, O.  
**Patterns.** (Metal.)  
Richmond Pattern Works, Richmond, Va.  
Ryan, J. J. & Co., Chicago, Ill.  
Wilks Foundry Co., Toledo, O.  
**Patterns.** (Wooden.)  
Richmond Pattern Works, Richmond, Va.  
Wilks Foundry Co., Toledo, O.  
**Paving Material.**  
Barrett Mfg. Co., Philadelphia, Pa.  
National Roofing & Supply Co., Louisville, Ky.  
**Perforated Metal.**  
Aitchison Perforated Metal Co., Robert, Chicago, Ill.  
Beckley, A. J. Co., Garwood, N. J.  
Caldwell, H. W. & Son Co., Chicago, Ill.  
Harrington & King Perforating Co., Chicago, Ill.  
Hendrick Mfg. Co., The, Ltd., Carbondale, Pa.  
Ludlow-Saylor Wire Co., The, St. Louis, Mo.  
Mundt, Charles, & Sons, New York, N. Y.  
Stimpson, R. W. & Son, New York, N. Y.  
**Petroleum.** (Fuel.)  
Gulf Refining Co., Pittsburg, Pa.  
**Phosphate Machinery.**  
Bailey-Lobby Co., The, Charleston, S. C.  
Bradley Pulverizer Co., Boston, Mass.  
Cameron & Barkley Co., Charleston, S. C.  
Crescent Co., Geo. V., New York, N. Y.  
Foss Mfg. Co., Springfield, O.  
Link-Belt Engineering Co., Philadelphia, Pa.  
McLanahan-Stone Machine Co., Hollidaysburg, Pa.  
Raymond Bros. Impact Pulverizer Co., Chicago, Ill.  
Simpson, J. S. & G. F., Brooklyn, N. Y.  
Smith & Co. F. L., New York, N. Y.  
Tompkins, D. A. Co., Charlotte, N. C.  
Walk & Murdoch Iron Works, Charleston, S. C.  
Walker & Elliott, Wilmington, Del.  
**Phosphor Bronze.** (Wire Rods, Sheets.)  
Ryan, J. J. & Co., Chicago, Ill.  
Phosphor Bronze Smelting Co., Ltd., Philadelphia, Pa.  
Van Duzen, E. W., Co., Cincinnati, O.  
**Planes and Organs.**  
Steff, Charles M., Baltimore, Md.  
**Pig Iron.**  
Alabama Coal & Iron Co., Birmingham, Ala.  
Bourne-Fuller Co., Cleveland, O.  
**Piling.**  
International Crocoting & Const. Co., Galveston, Tex.  
West Pascagoula Crocote Wks., W. Pascagoula, Miss.  
**Pillow Blocks.**  
Caldwell, W. E., Co., Louisville, Ky.  
Crescent Co., Geo. V., New York, N. Y.  
Golden's Foundry & Machine Co., Columbus, Ga.  
**Pipe.** (Brass and Copper.)  
Waterbury Brass Co., New York, N. Y.  
**Pipe.** (Cast Iron.)  
Dimnick Pipe Co., Birmingham, Ala.  
General Fire Extinguisher Co., Providence, R. I.  
Glamorgan Pipe & Foundry Co., Lynchburg, Va.  
U. S. Cast Iron Pipe & Foundry Co., Chattanooga, Tenn.  
Wood, R. D. & Co., Philadelphia, Pa.  
**Pipe.** (Coil.)  
National Pipe Bending Co., New Haven, Conn.  
Wolf Co., Fred. W., Chicago, Ill.  
**Pipe.** (Lead.)  
Robertson Mfg. Co., James, Baltimore, Md.  
**Pipe.** (Riveted.)  
American Spiral Pipe Works, Chicago, Ill.  
Girard Boiler & Mfr. Co., Girard, O.  
Keeler, E. Co., Williamsport, Pa.  
Petroleum Iron Works Co., Washington, Pa.  
**Pipe.** (Sewer and Culvert.)  
Georgia Vitriol Brick & Clay Co., Augusta, Ga.  
Maryland Lime & Cement Co., Balto., Md.  
Pomona Terra Cotta Co., Pomona, N. C.  
Stevens' Sons Co., H., Macon, Ga.  
Tallarday Steel Pipe & Tank Co., Waterloo, Ia.  
Warner Co., Chas., Wilmington, Del.  
**Pipe.** (Sheet Steel.)  
Dixie Mfg. Co., Baltimore, Md.  
Tallarday Steel Pipe & Tank Co., Waterloo, Ia.  
**Pipe.** (Spiral Riveted.)  
American Spiral Pipe Works, Chicago, Ill.  
**Pipe.** (Wrought Iron.)  
Bourne-Fuller Co., Cleveland, O.  
Columbia Supply Co., Columbia, S. C.  
General Fire Extinguisher Co., Providence, R. I.  
Simmons, John, Co., New York, N. Y.  
**Pipe Cutting and Threading Mach.**  
Reed Mfg. Co., Erie, Pa.  
Saunders' Sons, D., Yonkers, N. Y.  
**Pipe Fittings.**  
Columbia Supply Co., Columbia, S. C.  
General Fire Extinguisher Co., Providence, R. I.  
Robertson Mfg. Co., James, Baltimore, Md.  
Simmons, John, Co., New York, N. Y.  
Wolf Co., Fred. W., Chicago, Ill.  
**Pipe Flanges.** (Weldless Steel.)  
Latrobe Steel Co., Philadelphia, Pa.  
**Pipe Unions and Joints.**  
Dart Mfg. Co., E. M., Providence, R. I.  
**Planners.** (Metal.)  
Baird Mfg. Co., Pittsburg, Pa.  
Bailey-Lobby Co., Charleston, S. C.  
Savannah Locomotive & Car Works, Savannah, Ga.  
Walke, Henry, Co., Norfolk, Va.  
**Plaster Ornaments.**  
French, Samuel H. & Co., Philadelphia, Pa.  
**Plating.** (Nickel.)  
Benson & Van Winkle Co., Newark, N. J.  
Wisconsin Iron & Wire Works, Milwaukee, Wis.  
**Plumbers' Supplies and Tools.**  
Reed Mfg. Co., Erie, Pa.  
Robertson Mfg. Co., James, Baltimore, Md.  
Simmons, John, Co., New York, N. Y.  
**Portable Tools.** (For Railway Repair Shops.)  
Underwood, H. B. & Co., Philadelphia, Pa.  
**Power Transmitting Machinery.**  
Brown, A. & F., Co., New York, N. Y.  
Caldwell, H. W. & Son Co., Chicago, Ill.  
Case Mfg. Co., Columbus, O.  
Crescent Co., Geo. V., New York, N. Y.  
Fairmount Machine Co., Philadelphia, Pa.  
Hunt Co., C. W., New York, N. Y.  
Lane Mfg. Co., Montpelier, Vt.  
Link-Belt Engineering Co., Philadelphia, Pa.  
Northern Electric Mfg. Co., Madison, Wis.  
Nordyke & Marmon Co., Indianapolis, Ind.  
Wood's T. B., Sons, Chambersburg, Pa.  
**Presses.** (Baling, Cottonseed Oil, etc., Hydraulic and Power.)  
Boomer & Bochart Press Co., Syracuse, N. Y.  
Bushnell Press Co., G. H., Thompsonville, Conn.  
Cardwell Machine Co., Richmond, Va.  
Continental Gin Co., Birmingham, Ala.  
Gibbes, W. H. & Co., Columbia, S. C.  
Johnson, John, & Co., New York, N. Y.  
Tompkins, D. A. Co., Charlotte, N. C.  
Walk & Murdoch Iron Works, Charleston, S. C.  
Water-Stillman Co., New York, N. Y.  
**Presses.** (Stamping.)  
Lester, Chas., & Co., Brooklyn, N. Y.  
Niagara Machine & Tool Works, Buffalo, N. Y.  
**Pulleys.** (Friction Clutch.)  
Blakeslee Mfg. Co., Birmingham, Ala.  
Brown, A. & F., Co., New York, N. Y.  
Crescent Co., Geo. V., New York, N. Y.  
Fairmount Machine Co., Philadelphia, Pa.  
Smith, S. Morgan, Co., York, Pa.  
Williams, M. F., Mfg. Co., St. Louis, Mo.  
Wood's T. B., Sons, Chambersburg, Pa.  
**Pulleys.** (Pneumatic.)  
Williams, M. F., Mfg. Co., St. Louis, Mo.  
**Pulleys.** (Wood Split.)  
Caldwell, H. W. & Son Co., Chicago, Ill.  
Caldwell, W. E., Co., Louisville, Ky.  
Chase Pulley Co., Providence, R. I.  
Federal Mfg. Co., Milwaukee, Wis.

Kenney Pulley Co., Toledo, O.  
Lane Mfg. Co., Montpelier, Vt.  
Onida Steel Pulley Co., Onida, N. Y.  
Haginaw Mfg. Co., Haginaw, Mich.  
Smith, H. B., Machine Co., Smithville, N. J.  
**Pulleys.** (Steel Split.)  
American Pulley Co., Philadelphia, Pa.  
Federal Mfg. Co., Milwaukee, Wis.  
Onida Steel Pulley Co., Onida, N. Y.  
**Pulleys, Shafting and Hangers.**  
Brown, A. & F., Co., New York, N. Y.  
Caldwell, H. W. & Son Co., Chicago, Ill.  
Case Mfg. Co., Columbus, O.  
Crescent Co., Geo. V., New York, N. Y.  
Davis Foundry & Machine Works, Rome, Ga.  
Fairmount Machine Co., Philadelphia, Pa.  
Fay, J. A. & Egan Co., Cincinnati, O.  
Federal Mfg. Co., Milwaukee, Wis.  
Gainesville Iron Works, Gainesville, Ga.  
Golden's Foundry & Machine Co., Columbus, Ga.  
Greenwald Co., I. & E., Cincinnati, O.  
Jeffrey Mfg. Co., The, Columbus, O.  
Lane Mfg. Co., Montpelier, Vt.  
Link-Belt Engineering Co., Philadelphia, Pa.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
Maryland Foundry & Machine Co., Baltimore, Md.  
Nordyke & Marmon Co., Indianapolis, Ind.  
Schofield, J. S., Sons Co., Macon, Ga.  
Smith, H. B., Machine Co., Smithville, N. J.  
Tompkins, D. A. Co., Charlotte, N. C.  
Valley Iron Works, Williamsport, Pa.  
Wolf Co., Chambersburg, Pa.  
Wood's T. B., Sons, Chambersburg, Pa.  
**Pumps.** (Hot Air.)  
American Machine Co., Wilmington, Del.  
**Pumps.** (Centrifugal.)  
Erie Pump & Engine Co., Erie, Pa.  
Routenark Foundry & Machine Co., Philadelphia, Pa.  
Wood & Co., R. D., Philadelphia, Pa.  
**Pumps.** (Hand.)  
Flint & Walling Mfg. Co., Kendallville, Ind.  
**Pumps.** (Hydraulic.)  
American Steam Pump Co., Battle Creek, Mich.  
Cardwell Machine Co., Richmond, Va.  
Niagara Hydraulic Engine Co., Chester, Pa.  
Watson-Stillman Co., New York, N. Y.  
**Pumps.** (Pneumatic.)  
Bacon Air Lift Co., New York, N. Y.  
Ingersoll Sergeant Drill Co., New York, N. Y.  
Pneumatic Engineering Co., New York, N. Y.  
**Pumps.** (Power Roller-Feed.)  
Cameron Steam Pump Works, A. S., New York, N. Y.  
McGowan, John H., Cincinnati, O.  
Park Mfg. Co., Charlotte, N. C.  
Worthington, Henry E., New York, N. Y.  
**Pumps.** (Steam.)  
Alberger Condenser Co., New York, N. Y.  
American Steam Pump Co., Battle Creek, Mich.  
Cameron Steam Pump Works, A. S., New York, N. Y.  
Cameron & Barkley Co., Charleston, S. C.  
Cook Well Co., St. Louis, Mo.  
Downie Pump Co., Downieville, Pa.  
Gibbes, W. H. & Co., Columbia, S. C.  
McGowan, John H., Cincinnati, O.  
Murray Iron Works, Burlington, Iowa.  
Pulometer Steam Pump Co., New York, N. Y.  
Savannah Locomotive & Car Works, Savannah, Ga.  
Scranton Steam Pump Co., Scranton, Pa.  
Stillwell-Bierce & Smith-Vaile Co., Dayton, O.  
Worthington, Henry E., New York, N. Y.  
**Pumps.** (Trench.)  
Edson Manufacturing Co., Boston, Mass.  
**Pumping Machinery.**  
American Steam Pump Co., Battle Creek, Mich.  
Bacon Air Lift Co., New York, N. Y.  
Cameron, A. S., Steam Pump Works, New York, N. Y.  
Cook Well Co., The, St. Louis, Mo.  
Downie Pump Co., Downieville, Pa.  
Erie Pump & Engine Co., Erie, Pa.  
Myers, F. E. & Bro., Ashland, O.  
Pneumatic Engineering Co., New York, N. Y.  
Stillwell-Bierce & Smith-Vaile Co., Dayton, O.  
Walke, Henry, Co., Norfolk, Va.  
Wood, R. D. & Co., Philadelphia, Pa.  
Worthington, Henry E., New York, N. Y.  
**Punching and Shearing Machinery.**  
Bertsch & Co., Cambridge City, Ind.  
Niagara Machine & Tool Works, Buffalo, N. Y.  
Robinson, J. M., Mfg. Co., Cincinnati, O.  
Royerford Foundry & Machine Co., Royerford, Pa.  
Wood, R. D. & Co., Philadelphia, Pa.  
**Quarrying and Stonecutting Mach.**  
Ingersoll-Sergeant Drill Co., New York, N. Y.  
Jeffrey Mfg. Co., Columbus, O.  
Rand Drill Co., New York, N. Y.  
Sullivan Machinery Co., Chicago, Ill.  
**Rack Locomotives.** (See Locomotive Bldrs.)  
**Railroad Equipment and Supplies.**  
(New and Second-hand.)  
Alabama Frog & Switch Co., Anniston, Ala.  
American Frog & Switch Co., Hamilton, O.  
American Locomotive Co., New York, N. Y.  
Apex Equipment Co., New York, N. Y.  
Bailey-Lobby Co., The, Charleston, S. C.  
Bourne-Fuller Co., Cleveland, O.  
Birmingham Rail & Locomotive Co., Birmingham, Ala.  
Bowen & Street Equipment Co., Norfolk, Va.  
Contractors Equipment Co., Philadelphia, Pa.  
Cox, Jr., Justice, & Co., Ltd., Philadelphia, Pa.  
Davis & Bryan, Philadelphia, Pa.  
Fitz-Hugh-Luther Co., Chicago, Ill.  
Harper Machinery Co., New York, N. Y.  
Hartfelder-Garbutt Co., Savannah, Ga.  
Hitner's, H. A., Sons, Philadelphia, Pa.  
Hyde Bros. & Co., Pittsburg, Pa.  
Johnson, Chas. F., Buffalo, N. Y.  
Joseph Iron Co., Isaac, Cincinnati, O.  
Kilby Locomotive & Machine Works, Anniston, Ala.  
Koppel, Arthur, New York, N. Y.  
Low, Edgar S., Co., Pittsburg, Pa.  
Maclear, J. H. & Co., Suffolk, Va.  
Males Co., Cincinnati, O.  
May & Spalding, Atlanta, Ga.  
New York Equipment Co., New York, N. Y.  
Porter, H. K., Co., Pittsburg, Pa.  
Poulterer & Co., Philadelphia, Pa.  
Robinson & Orr, Pittsburg, Pa.  
Sabel Bros., Jacksonville, Fla.  
Savannah Loco. Wks. & Supply Co., Savannah, Ga.  
Smith-Courtney Co., Richmond, Va.  
Steel Rail Supply Co., The, New York, N. Y.  
Southern Iron & Equipment Co., Atlanta, Ga.  
Watson, Benj., New York, N. Y.  
Weir Frog Co., Cincinnati, O.  
Western Supply & Mfg. Co., East St. Louis, Mo.  
Worham-Magor Eng. Works, New York, N. Y.  
Zelicker, W. A., Supply Co., St. Louis, Mo.  
**Railroad Frog and Switches.**  
Alabama Frog & Switch Co., Anniston, Ala.  
American Frog & Switch Co., Hamilton, O.  
Apex Equipment Co., New York, N. Y.  
Koppel, Arthur, New York, N. Y.  
May & Spalding, Atlanta, Ga.  
Weir Frog Co., Cincinnati, O.  
Worham-Magor Eng. Works, New York, N. Y.  
Zelicker, W. A., Supply Co., St. Louis, Mo.  
**Rails.** (Steel.)  
Apex Equipment Co., New York, N. Y.  
Bourne-Fuller Co., Cleveland, O.  
Carey, George H., New York, N. Y.  
Continental Iron & Steel Co., New York, N. Y.  
Davis, O. W., New York, N. Y.  
Franks, J. H., Savannah, Ga.  
Hamel, Jno. J., & Co., Pittsburg, Pa.  
Hitner's, H. A., Sons, Philadelphia, Pa.  
Johnson, Chas. F., Buffalo, N. Y.  
Koppel, Arthur, New York, N. Y.  
Maclear, J. H., & Co., Suffolk, Va.  
Males Co., Cincinnati, O.  
Maryland Rail Co., Cumberland, Md.  
Richardson & Co., Inc., Pittsburg, Pa.  
Robinson & Orr, Pittsburg, Pa.  
Rutter, C. H., Easton, Pa.  
Schonthal Iron & Steel Co., Cumberland, Md.

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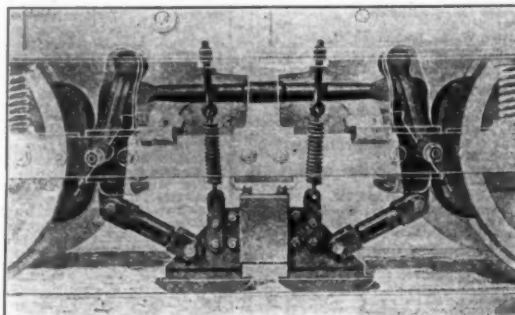
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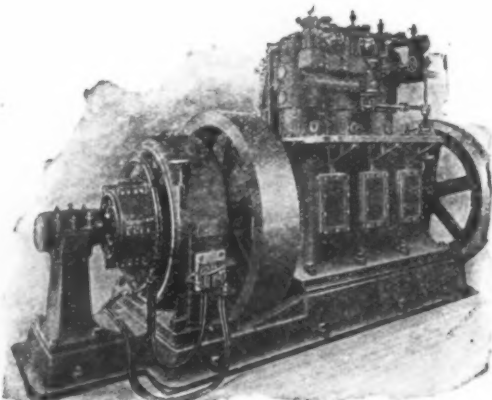
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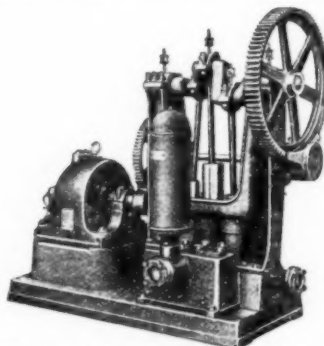
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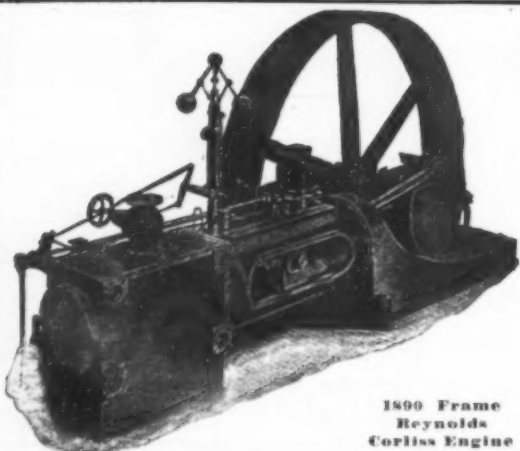
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## Classified Index of Articles Advertised

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Simpers, Thos. W. & Co., Philadelphia, Pa.  
Steel Rail Supply Co., The, New York, N. Y.  
Union Rail Co., Pittsburg, Pa.  
Western Supply & Mfg. Co., East St. Louis, Mo.  
Worham-Magor Eng. Works, New York, N. Y.  
Zelicker, W. A., Supply Co., St. Louis, Mo.

**Reamers.**  
Morse Twist Drill & Machine Co., New Bedford, Mass.  
Pratt & Whitney Co., Hartford, Conn.

**Regulators.** (Water and Steam Pressure.)  
Crosby Steam Gauge & Valve Co., Boston, Mass.

**Repairs.** (Engine & Pump.)  
Underwood, H. B. & Co., Philadelphia, Pa.

**Riveters.** (Pneumatic.)  
Rand Drill Co., New York, N. Y.

**Road Machinery.**  
Acme Road Machinery Co., Frankfort, N. Y.  
Kelly-Springfield Road Roller Co., Springfield, O.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.

**Rock Crushers.**  
Austin Mfg. Co., Chicago, Ill.

**Cresson, Geo. V. Co., New York, N. Y.**  
N. J. Foundry & Machine Co., New York, N. Y.

**Roofers' and Tanners' Supplies.**  
Chattanooga Roof & Fdry. Co., Chattanooga, Tenn.  
Niagara Machine & Tool Works, Buffalo, N. Y.  
Merchant & Co., Inc., Philadelphia, Pa.  
Robinson, J. M. Mfg. Co., Cincinnati, O.

**Roofing Tin.** (SEE TIN ROOFING.)  
**Roofing.** (Felt, Tar, Asphalt, Paper, etc.)  
American Roofing Co., Mobile, Ala.  
American Tinsmith Co., Pittsburg, Pa.  
Armstrong Mfg. Co., The, Richmond, Va.  
Asphalt Ready Roofing Co., New York, N. Y.  
Barrett Mfg. Co., Philadelphia, Pa.  
Buchanan-Foster Co., Philadelphia, Pa.  
Bird, F. W. & Co., East Walpole, Mass.  
Bird, J. A. & W. & Co., Boston, Mass.  
Carey, Philip, Mfg. Co., Lockland, O.  
Chattanooga Roof & Fdry. Co., Chattanooga, Tenn.  
Eastern Granite Roofing Co., New York, N. Y.  
Garrett, C. S. & Son, Co., Philadelphia, Pa.  
Maryland Lime & Cement Co., Balto., Md.  
Miller Oil & Supply Co., Indianapolis, Ind.  
National Roofing & Supply Co., Louisville, Ky.  
Standard Paint Co., New York, N. Y.  
Stowell Mfg. Co., Jersey City, N. J.  
Warren Chemical & Mfg. Co., New York, N. Y.  
Zelicker, W. A., Supply Co., St. Louis, Mo.

**Roofing.** (Metal Shingles.)  
Chattanooga Roof & Fdry. Co., Chattanooga, Tenn.  
Cortright Metal Roofing Co., Philadelphia, Pa.  
Merchant & Co., Inc., Philadelphia, Pa.  
Montrose Metal Shingle Co., Camden, N. J.  
Penn Metal Ceiling & Roofing Co., Phila., Pa.

**Roofing.** (Slate.)  
Downman-Dorrier Mfg. Co., Atlanta, Ga.  
Galt, John, & Sons, New York, N. Y.  
Genuine Bangor Slate Co., Easton, Pa.  
McKenna, David, Slatington, Pa.

**Roofing and Siding.** (Metal.)  
Cortright Metal Roofing Co., Philadelphia, Pa.  
Downman-Dorrier Mfg. Co., Atlanta, Ga.  
Merchant & Co., Inc., Philadelphia, Pa.  
Scaife, Wm. B. & Sons Co., Pittsburg, Pa.  
Simpers, Thos. W. & Co., Philadelphia, Pa.  
Virginia Bridge & Iron Co., Roanoke, Va.

**Ropes.** (Transmission.)  
American Mfg. Co., The, New York, N. Y.  
Broderick & Bascom Rope Co., St. Louis, Mo.  
Caldwell, W. E. & Co., Louisville, Ky.  
Columbian Cordage Co., Auburn, N. Y.  
Cresson Co., Geo. V., New York, N. Y.  
Durable Wire Rope Co., Boston, Mass.  
Hunt Co., C. W., West Brighton, N. Y.  
Ironclad Co., Columbus, O.  
Link-Belt Engineering Co., Philadelphia, Pa.  
Woods' Sons, T. B., Chambersburg, Pa.

**Rubber Goods.**  
Boston Belting Co., Boston, Mass.  
Eureka Fire Hose Co., New York, N. Y.  
New Jersey Car Spring & Rubber Co., Jersey City, N. J.  
Pennsylvania Rubber Co., New York, N. Y.  
Voorhees Rubber Mfg. Co., Jersey City, N. J.

**Sacks.** (Fertilizer.)  
Bailey, John T. & Co., Philadelphia, Pa.

**Safety Water Columns and Gauges.**  
Amer. Stm. Gauge & Valve Mfg. Co., Jan. Plain, Mass.  
Crosby Steam Gauge & Valve Co., Boston, Mass.  
Lunkenheimer Co., Cincinnati, O.  
Reliance Gauge Column Co., Cleveland, O.

**Saws and Files.**  
York Safe & Lock Co., York, Pa.

**Saws.** (Band.)  
Atkins, E. C. & Co., Indianapolis, Ind.  
Fay, J. A. & Egan Co., Cincinnati, O.  
Smith, H. B., Machine Co., Smithville, N. J.

**Saw Gunner.**  
Miller Oil & Supply Co., Indianapolis, Ind.

**Saws.** [See Woodworking Machinery.]  
Atkins, E. C. & Co., Indianapolis, Ind.  
Gibbs, W. H. & Co., Columbia, S. C.  
Huther Bros., Rochester, N. Y.  
Miller Oil & Supply Co., Indianapolis, Ind.  
Smith, H. B., Machine Co., Smithville, N. J.

**Saw-Mill Machinery.**  
Bailey-Lebby Co., The, Charleston, S. C.  
Beach, H. W., Montrose, Pa.  
Cameron & Barkley Co., Charleston, S. C.  
Chattanooga Machinery Co., Chattanooga, Tenn.  
Columbia Supply Co., Columbia, S. C.  
DeLoach Mill Mfg. Co., Atlanta, Ga.  
Farquhar Co., A. B., Ltd., York, Pa.  
Fay, J. A. & Egan Co., Cincinnati, O.  
Frick Co., Waynesboro, Pa.  
Gibbs, W. H. & Co., Columbia, S. C.  
Hartfelder-Garbutt Co., Savannah, Ga.  
Hench & Dromgold Co., York, Pa.  
Hill, Wm. E. & Co., Kalamazoo, Mich.  
Lane Mfg. Co., Montpelier, Vt.  
Mecklenburg Iron Works, Charlotte, N. C.  
Schofield's, J. S., Sons Co., Macon, Ga.  
Smith, H. B., Machine Co., Smithville, N. J.  
Soule Steam Feed Works, Jackson, Miss.  
Southern Eng. & Boiler Works, Jackson, Tenn.  
Union Iron Works Co., Selma, Ala.  
Zelicker, W. A., Supply Co., St. Louis, Mo.

**Saw Sharpeners and Files.** (Cotton Gin.)  
Carr Cotton Gin Co., East Bridgewater, Mass.

**Scales.**  
McDonald Bros., Pleasant Hill, Mo.  
Osgood Scale Co., Binghamton, N. Y.  
Richardson Scale Co., New York, N. Y.  
Standard Scale & Supply Co., Ltd., Pittsburg, Pa.

**Scales.** (Automatic.)  
Richardson Scale Co., New York, N. Y.

**Scrap Iron and Steel.**  
May & Spalding, Atlanta, Ga.  
Cohen-Schwartz Ball & Steel Co., St. Louis, Mo.

**Screens.** (Fly, Window and Door.)  
Barrows, E. T., Co., Portland, Me.  
New Jersey Wire Cloth Co., Trenton, N. J.

**Screens.** (Ore, Coke, etc.)  
Atchison, R., Perforated Metal Co., Chicago, Ill.  
Beckley, A. J. Co., Garwood, N. J.  
Cresson Co., Geo. V., New York, N. Y.  
Harrington & Rieg Perforating Co., Chicago, Ill.  
Hendrick Mfg. Co., Ltd., Carbondale, Pa.  
Jeffrey Mfg. Co., The, Columbus, O.  
Ludlow-Saylor Wire Co., The, St. Louis, Mo.  
New Jersey Wire Cloth Co., Trenton, N. J.  
Meyers Mfg. Co., Fred. J., Hamilton, O.  
Mundt & Sons, Charles, New York, N. Y.  
McLennan-Stone Machine Co., Hollidaysburg, Pa.  
Winconsin Iron & Wire Works, Milwaukee, Wis.

**Screw Plates.**  
Polk, A. J. & Son, Millersburg, Pa.

**Screw Saws.** [See Woodworking Machinery.]  
Fay, J. A. & Egan Co., Cincinnati, O.  
Smith, H. B., Machine Co., Smithville, N. J.

**Seals.** (Stock Certificates, etc.)  
Middleton, J. W., Chicago, Ill.  
National Seal Works, Richmond, Va.

**Separators.** (Dust.)  
Allington & Curtis Mfg. Co., Saginaw, Mich.  
Dixie Mfg. Co., Baltimore, Md.  
Sturtevant Co., B. F., Boston, Mass.

**Separators.** (Steam and Oil.)  
Bates Machine Co., Joliet, Ill.  
Scranton Steam Pump Co., Scranton, Pa.  
Webster & Co., Warren, Philadelphia, Pa.

**Shapers.**  
Bailey-Lebby Co., Charleston, S. C.  
Baird Mch. Co., Pittsburg, Pa.  
Wiske, Henry Co., Norfolk, Va.

**Sharpening Stones.**  
Pike Mfg. Co., Pike Station, N. H.  
Vitrified Wheel Co., Westfield, Mass.

**Sheet Steel and Iron.**  
Bourne-Fuller Co., Cleveland, O.  
Simpers, Thos. W. & Co., Philadelphia, Pa.  
Taylor, N. & G. Co., Philadelphia, Pa.

**Shingles.** (Metal.)  
Chattanooga Roof & Fdry. Co., Chattanooga, Tenn.  
Cortright Metal Roofing Co., Philadelphia, Pa.  
Merchant & Co., Inc., Philadelphia, Pa.  
Montrose Metal Shingle Co., Camden, N. J.  
Penn Metal Ceiling & Roofing Co., Phila., Pa.

**Ship Builders.** (Iron and Steel.)  
Baltimore Shipbuilding & Dry Dock Co., Balto., Md.  
Newport News Shipbuilding & Dry Dock Co., Newport News, Va.

**Shutters.** (Steel Rolling.)  
Kinner Mfg. Co., Columbus, O.

**Skylights.**  
Chattanooga Roof & Fdry. Co., Chattanooga, Tenn.  
Downman-Dorrier Mfg. Co., Atlanta, Ga.  
Merchant & Co., Inc., Philadelphia, Pa.  
Van Noorden, E. Co., Boston, Mass.

**Slates.** (Roofing.)  
Galt, John, & Sons, New York, N. Y.  
Genuine Bangor Slate Co., Easton, Pa.  
McKenna, David, Slatington, Pa.

**Slaters' Tools.**  
Galt, John, & Sons, New York, N. Y.

**Smoke Stacks.** (Iron and Steel.)  
Birmingham Boiler Works, Birmingham, Ala.  
Girard Boiler & Mfg. Co., Girard, O.  
Keeler, E. Co., Williamsport, Pa.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
Petroleum Iron Works Co., Washington, Pa.  
Schofield's, J. S., Sons Co., Macon, Ga.

**Solder.**  
Hertz, Theo., Metal Co., St. Louis, Mo.  
Ryan, J. J. & Co., Chicago, Ill.

**Speaking Tubes.**  
Electrical Material Co., Baltimore, Md.

**Spelter.**  
Hertz, Theo., Metal Co., St. Louis, Mo.

**Spikes.**  
The Diamond State Steel Co., Wilmington, Del.

**Springs.** (Bicycle Saddle, Machinery, Railway and Spiral.)  
Boston Belting Co., Boston, Mass.  
Cary Spring Works, New York, N. Y.  
Ludlow-Saylor Wire Co., The, St. Louis, Mo.

**Sprinklers.** (Automatic.)  
Bailey-Lebby Co., Charleston, S. C.  
General Fire Extinguisher Co., Providence, R. I.

**Stamp Mills.**  
Gainesville Iron Works, Gainesville, Ga.  
Mecklenburg Iron Works, Charlotte, N. C.

**Standpipes.**  
Birmingham Boiler Works, Birmingham, Ala.  
Girard Boiler & Mfg. Co., Girard, O.  
Hartley Boiler Works, Montgomery, Ala.  
Keeler, E. Co., Williamsport, Pa.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
Means & Fulton Iron Works, Birmingham, Ala.  
Petroleum Iron Works Co., Washington, Pa.  
Virginia Bridge & Iron Co., Roanoke, Va.

**Steam Fitters Supplies.**  
General Fire Extinguisher Co., Providence, R. I.  
Maxfield, H. E. & Co., New York, N. Y.  
McWilliams, Jos. & Co., Louisville, Ky.  
Reed Mfg. Co., Erie, Pa.  
Simmons, John, Co., New York City.

**Steam Gages.**  
American Steam Gauge & Valve Mfg. Co., Jamaica Plain, Mass.  
Crosby St. Gauge & Valve Co., Boston, Mass.  
Lunkenheimer Co., Cincinnati, O.

**Steam Heating.**  
General Fire Extinguisher Co., Providence, R. I.  
Keeler, E. Co., Williamsport, Pa.  
Peck-Hammond Co., The, Cincinnati, O.  
Tompkins, D. A. Co., Charlotte, N. C.  
Webster & Co., Warren, Camden, N. J.

**Steam Shovels.** [See Dredges and Excavators.]

**Steam Traps.**  
American Blower Co., Detroit, Mich.  
Haines, W. S. Co., Phila., Pa.  
Sturtevant Co., B. F., Boston, Mass.

**Steamship Lines.**  
Baltimore Steam Packet Co., Baltimore, Md.  
Chesapeake Steamship Co., Baltimore, Md.  
Detroit & Buffalo Steamship Co., Detroit, Mich.  
Merchants & Miners' Trans. Co., Baltimore, Md.

**Steel.** (Manufacturers of.)  
American Sheet Steel Co., New York, N. Y.  
Bourne-Fuller Co., Cleveland, O.  
Chester Steel Castings Co., Philadelphia, Pa.  
Kennedy, Walter, Pittsburg, Pa.  
Taylor, N. & G. Co., Philadelphia, Pa.  
The Diamond State Steel Co., Wilmington, Del.

**Steel Buildings.** (Designers, Builders.)  
Prink & Hazen, Baltimore, Md.

**General Supply & Construction Co., New York, N. Y.**  
Scaife, Wm. B. & Sons Co., Pittsburg, Pa.  
Schreiber, L. & Sons Co., Cincinnati, O.  
Va. Bridge & Iron Co., Roanoke, Va.

**Steel Couplers.** (Automatic.)  
Lafayette Steel & Coupler Co., Philadelphia, Pa.

**Stills.** (Turpentine.)  
McMillan Bros. Co., Mobile, Ala.

**Stock Certificates, Bonds and Seals.**  
Middleton, J. W., Chicago, Ill.  
Myers Printing House, New Orleans, La.  
National Seal Works, Richmond, Va.

**Stokers.** (Mechanical.)  
Westinghouse, Church, Kerr & Co., Pittsburg, Pa.  
Westinghouse Machine Co., Pittsburg, Pa.

**Storage Receipts.**  
Baltimore Fidelity Warehouse Co., Baltimore, Md.

**Structural Steel and Iron.**  
Belmont Iron Works, Philadelphia, Pa.  
Bourne-Fuller Co., Cleveland, O.  
Chesapeake Iron Works, Baltimore, Md.  
Eureka Supply Co., Chattanooga, Tenn.  
General Supply & Construction Co., New York, N. Y.  
Girard Boiler & Mfg. Co., Girard, O.  
Scaife, Wm. B. & Sons Co., Pittsburg, Pa.  
Schreiber, L. & Sons Co., Cincinnati, O.  
Simpers, Thos. W. & Co., Philadelphia, Pa.  
Virginia Bridge & Iron Co., Roanoke, Va.  
Winconsin Iron & Wire Works, Milwaukee, Wis.

**Switchboards, Switches, etc.**  
Electrical Material Co., Baltimore, Md.  
Standard Electric Co., Norfolk, Va.  
Western Electrical Supply Co., St. Louis, Mo.  
Westinghouse Electric & Mfg. Co., Pittsburg, Pa.

**Tanks.** (Iron and Steel.)  
Birmingham Boiler Works, Birmingham, Ala.  
Caldwell, W. E. & Co., Louisville, Ky.  
Flint & Walling Mfg. Co., Kendallville, Ind.  
Girard Boiler & Mfg. Co., Girard, O.  
Hammond Iron Works, Warren, Pa.  
Harry Bros. Co., Dallas, Tex.  
Hartley Boiler Works, Montgomery, Ala.  
Keeler, E. Co., Williamsport, Pa.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
Means & Fulton Iron Works, Birmingham, Ala.  
Petroleum Iron Works Co., Washington, Pa.  
Scaife, W. B. & Sons Co., Pittsburg, Pa.  
Schofield's, J. S., Sons Co., Macon, Ga.  
Smith Co., S. Morgan, York, Pa.  
Tallarday Steel Pipe & Tank Co., Waterloo, Ia.

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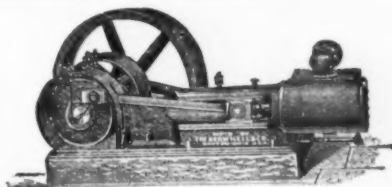
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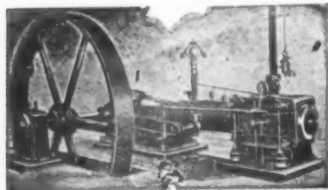
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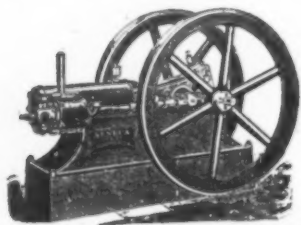
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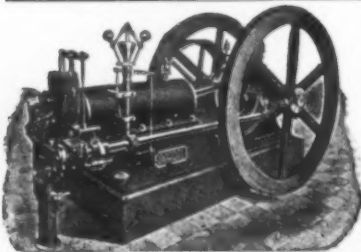
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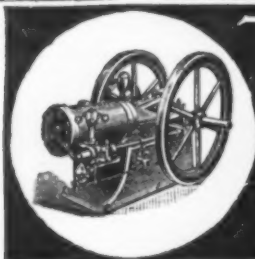
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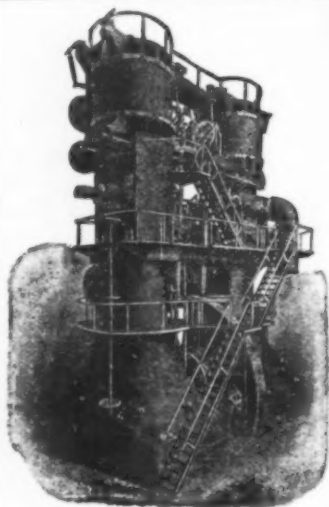


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on the strength of merit rather than price. In  
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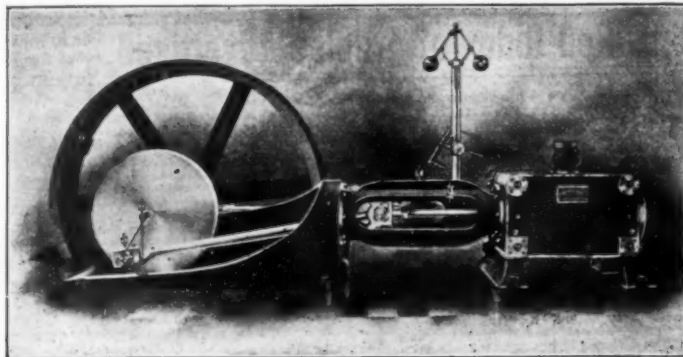


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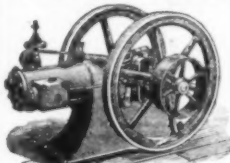
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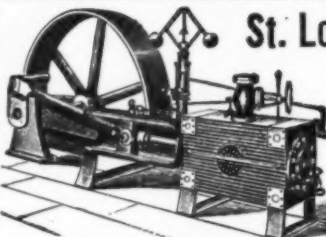
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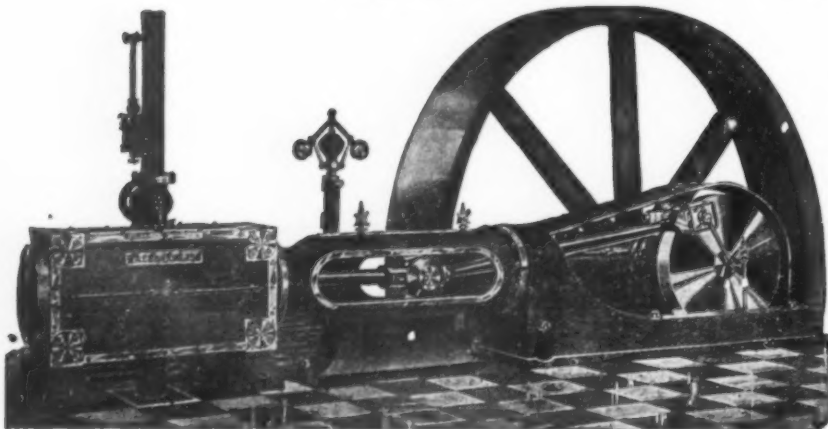
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LUDWIG & CO., Agents, Atlanta, Ga.

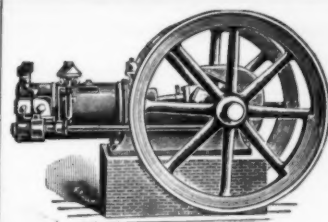


## Classified Index of Articles Advertised

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Tompkins, D. A., Co., Charlotte, N. C.  
Valk & Murdoch Iron Works, Charleston, S. C.  
Virginia Bridge & Iron Co., Roanoke, Va.  
Wood, B. D., & Co., Phila., Pa.  
**Tanks.** (Wood.)  
Caldwell Co., W. E., Louisville, Ky.  
Cypress Lumber Co., Apalachicola, Fla.  
Davis, G. M., & Son, Palatka, Fla.  
Lewis, H. F., & Co., Ltd., New Orleans, La.  
Tupelo Tank Co., Mobile, Ala.  
**Tapes.** (Measuring.)  
Lufkin Rule Co., Saginaw, Mich.  
**Telephones.** (Supplies, Equipment.)  
Alexander, Jr., Co., S. B., Charlotte, N. C.  
Electric Supply Co., Savannah, Ga.  
Electrical Material Co., Baltimore, Md.  
Medmont Electric Co., Asheville, N. C.  
Standard Electric Co., Norfolk, Va.  
Western Electrical Supply Co., St. Louis, Mo.  
**Telephone Poles.**  
Electrical Material Co., Baltimore, Md.  
Houston & Liggett, Louisville, Tenn.  
International Crompton & Const. Co., Galveston, Tex.  
**Terne Plate.**  
Merchant & Co., Inc., Philadelphia, Pa.  
Simpers, Thos. W., & Co., Philadelphia, Pa.  
Taylor, N. & G., Co., Philadelphia, Pa.  
**Terra Cotta.**  
Pomona Terra Cotta Co., Pomona, N. C.  
Sterns, H., Sons, Co., Macon, Ga.  
**Textile Machinery.** (See Cotton Mill Mach.)  
**Threshers.**  
Farquhar, A. B., Co., York, Pa.  
Cardwell Machine Co., Richmond, Va.  
Gibbes, W. H., & Co., Columbia, S. C.  
**Tin.** (Roofing.)  
American Tinplate Co., New York, N. Y.  
Taylor, N. & G., Co., Philadelphia, Pa.  
**Tinplate.**  
American Tinplate Co., New York, N. Y.  
Merchant & Co., Inc., Philadelphia, Pa.  
Simpers, Thos. W., & Co., Philadelphia, Pa.  
Taylor, N. & G., Co., Philadelphia, Pa.  
**Tires, Steel.** (Locomotive and Car.)  
Latrobe Steel Co., Philadelphia, Pa.  
**Tobacco Machinery.**  
Buckeye Iron & Brass Works, Dayton, O.  
Cardwell Machine Co., Richmond, Va.  
**Tools.** (Machine.) [See Machine Tools.]  
**Tools.** (Machine.) [See Machine Tools.]  
Barnes, W. F. & John, Co., Rockford, Ill.  
Morse Twist Drill & Machine Co., New Bedford, Mass.  
Tolk, A. J., & Son, Millersburg, Pa.  
Pratt & Whitney Co., Hartford, Conn.  
**Tools.** (Pneumatic.)  
Rand Drill Co., New York, N. Y.  
**Tools.** (Tinners.)  
Niagara Machine & Tool Works, Buffalo, N. Y.  
**Tools.** (For Rev. Rep. Shops.) [See Port. Tools.]  
**Torches.**  
Gem Mfg. Co., Pittsburgh, Pa.  
Wall, P., Mfg. Co., Allegheny, Pa.  
**Towers.** (Steel and Wood.)  
Caldwell Co., W. E., Louisville, Ky.  
Flint & Walling Mfg. Co., Kendallville, Ind.  
Tompkins, D. A., Co., Charlotte, N. C.  
**Tramway.** (Overhead.)  
Cohoes Iron Foundry & Machine Co., Cohoes, N. Y.  
Meyer, J. W., & Co., Philadelphia, Pa.  
New Jersey Edg. & Mch. Co., New York, N. Y.  
Speidel, J. G., Reading, Pa.  
**Tramway.** (Wire Rope.)  
Broderick & Bascom Rope Co., St. Louis, Mo.  
Caldwell, H. W., & Sons Co., Chicago, Ill.  
Gresson Co., George V., New York, N. Y.  
Flory, S., Mfg. Co., Bangor, Pa.  
Hunt Co., C. W., New York, N. Y.  
Jeffrey Mfg. Co., Columbus, O.  
Lidgerwood Mfg. Co., New York, N. Y.  
Link-Belt Engineering Co., Nictown (Phila.), Pa.  
McLanahan-Stone Machine Co., Hollidaysburg, Pa.  
Trenton Iron Co., Trenton, N. J.  
**Trucks and Drays.** (Hand.)  
Horner, W. P., Mfg. Co., Danville, Va.  
**Tube Cleaners.**  
Gem Mfg. Co., Pittsburgh, Pa.  
**Tabling.**  
Ludlow-Saylor Wire Co., The, St. Louis, Mo.  
**Tubing.** (Seamless, Brass, Copper & Brazed.)  
Waterbury Brass Co., New York, N. Y.  
**Turbines.** (See Water Wheels.)  
**Turbines.** (Steam.)  
Westinghouse, Church, Kerr & Co., Pittsburgh, Pa.  
Westinghouse Machine Co., Pittsburgh, Pa.  
**Turntables.**  
Koppel, Arthur, New York City.  
Males Co., Cincinnati, O.  
Virginia Bridge & Iron Co., Roanoke, Va.  
**Typewriters.**  
Pittsburg Writing Machine Co., Pittsburgh, Pa.  
Smith-Premier Typewriter Co., Baltimore, Md.  
**Typewriter Table Cabinets.**  
Dearborn Desk Co., Birmingham, Ala.  
**Valves.**  
Amer. Steam Gauge & Valve Mfg. Co., Jam. Plain, Mass.  
Boston Belting Co., Boston, Mass.  
Columbia Supply Co., Columbia, S. C.  
Crosby Steam Gauge & Valve Co., Boston, Mass.  
General Fire Extinguisher Co., Providence, R. I.  
Glamorgan Pipe & Foundry Co., Lynchburg, Va.  
Jenkins Bros., New York, N. Y.  
Ludlow Valve Mfg. Co., Troy, N. Y.  
Lunkenheimer Co., Cincinnati, O.  
Simmons, John, Co., New York City.  
Vorhes Rubber Mfg. Co., Jersey City, N. J.  
Wolf, Fred, W., & Co., Chicago, Ill.  
Wood, E. D., & Co., Philadelphia, Pa.  
**Veneer Machines.**  
Coe Mfg. Co., The, Painesville, O.  
Titus, E. E., Petersburg, Va.  
**Ventilators.**  
Downman-Doxler Mfg. Co., Atlanta, Ga.  
Merchant & Co., Inc., Philadelphia, Pa.  
**Vices.**  
Reed Mfg. Co., Erie, Pa.  
**Wagon Builders' Mch. & Supplies.**  
Cordeman, Meyer & Co., Cincinnati, O.  
Fay, J. A., & Egan Co., Cincinnati, O.  
**Warehouse.** (Fidelity.)  
Baltimore Fidelity Warehouse Co., Baltimore, Md.  
**Washers.** (Ore and Phosphate.)  
Bailey-Leiby Co., The, Charleston, S. C.  
Cameron & Barkley Co., Charleston, S. C.  
McLanahan-Stone Co., Hollidaysburg, Pa.

**Watchman's Clocks.**  
Electrical Material Co., Baltimore, Md.  
Imhauser & Co., E., New York City.  
Nanz & Co., New York, N. Y.  
Wagoner Watchman Clock Co., Grand Rapids, Mich.  
**Water Power.**  
Roanoke Navigation & Water Power Co., Weldon, N.C.  
**Waterproof Cellar Engineer.**  
Gillbreth, Frank B., Boston, Mass.  
**Water-Wheel Governor.**  
Renlogie Governor Works, Akron, O.  
**Water Softening Apparatus.** (Purifying.)  
Scaife, Wm. B., & Sons Co., Pittsburgh, Pa.  
**Water-Wheels and Turbines.**  
Davis Foundry & Machine Works, Rome, Ga.  
Lane Mfg. Co., Montpelier, Vt.  
Lefell, James & Co., Springfield, O.  
Norris, Burnham & Co., Inc., Glen Rock, Pa.  
Radon-Alcott Turbine Co., Mount Holly, N. J.  
Smith Co., S. Morgan, York, Pa.  
Stillwell-Bierce & Smith-Valle Co., Dayton, O.  
Westinghouse, Church, Kerr & Co., Pittsburgh, Pa.  
Westinghouse Mch. Co., Pittsburgh, Pa.  
**Water Meters.**  
Pittsburg Meter Co., E. Pittsburgh, Pa.  
Worthington, Henry R., New York, N. Y.  
**Water-Works Supplies.**  
Glamorgan Pipe & Foundry Co., Lynchburg, Va.  
Pomona Terra Cotta Co., Pomona, N. C.  
Sterns, H., Sons, Co., Macon, Ga.  
U. S. Cast Iron Pipe & Foundry Co., Chicago, Ill.  
Wood, B. D., & Co., Philadelphia, Pa.  
**Weighing Machinery.** (Automatic.)  
Richardson Scale Co., New York, N. Y.  
**Well Contractors.** (Oil, Artesian, etc.)  
Andrews, Perry & Bro., Atlanta, Ga.  
Bacon Air Lift Co., New York, N. Y.  
Cook Well Co., St. Louis, Mo.  
Ford, Isaac H., New York, N. Y.  
Hughes Specialty Well Drilling Co., Charleston, S. C.  
**Well Tools and Supplies.**  
Andrews, Perry & Bro., Atlanta, Ga.  
Bacon Air Lift Co., New York, N. Y.  
Cook Well Co., The, St. Louis, Mo.  
Ford, Isaac H., New York, N. Y.  
Hughes Specialty Well Drilling Co., Charleston, S. C.  
Kelly & Taneyhill Co., Waterloo, Ia.  
Williams Bros., Ithaca, N. Y.  
**Wheelbarrows and Trucks.**  
Jackson Mfg. Co., Harrisburg, Pa.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
**Whistles.** (Chimes, Sirens, etc.)  
Amer. Steam Gauge & Valve Mfg. Co., Jam. Plain, Mass.  
Crosby Steam Gauge & Valve Co., Boston, Mass.  
Lunkenheimer Co., Cincinnati, O.  
**White Lead.**  
French, Samuel H., & Co., Philadelphia, Pa.  
**Whitewashing Machinery.**  
Hook, F. E., Hudson, Mich.  
Star Brass Works, Chicago, Ill.  
**Windlasses.**  
American Ship Windlass Co., Providence, R. I.  
**Windmills.**  
Flint & Walling Mfg. Co., Kendallville, Ind.  
**Window Guards.** (Wire.) [See Wire Goods.]  
**Wire, Barbed Wire, etc.**  
Broderick & Bascom Rope Co., St. Louis, Mo.  
Ludlow-Saylor Wire Co., The, St. Louis, Mo.  
Roebling's, J. A., Sons Co., Trenton, N. J.  
**Wire.** (Brass and Copper.)  
Waterbury Brass Co., New York, N. Y.  
**Wire Cloth.** (Iron, Steel, Brass, etc.)  
Buffalo Wire Works Co., Buffalo, N. Y.  
Caldwell, H. W., & Sons Co., Chicago, Ill.  
Meyers, Fred, J., Mfg. Co., Hamilton, O.  
New Jersey Wire Cloth Co., Trenton, N. J.  
**Wire Goods.**  
Boiler Iron & Wire Works, J. E., Detroit, Mich.  
Buffalo Wire Works Co., Buffalo, N. Y.  
Dufur & Co., Baltimore, Md.  
Eureka Supply Co., Chattanooga, Tenn.  
Ludlow-Saylor Wire Co., The, St. Louis, Mo.  
Meyers Mfg. Co., The, Fred J., Hamilton, O.  
New Jersey Wire Cloth Co., Trenton, N. J.  
**Wire Netting.**  
Buffalo Wire Works Co., Buffalo, N. Y.  
New Jersey Wire Cloth Co., Trenton, N. J.  
**Wire Rope.**  
Broderick & Bascom Rope Co., St. Louis, Mo.  
Contractors Plant Mfg. Co., Buffalo, N. Y.  
Durable Wire Rope Co., Boston, Mass.  
Hazard Mfg. Co., Wilkes Barre, Pa.  
Lidgerwood Mfg. Co., New York, N. Y.  
Roebling's John A., Sons Co., Trenton, N. J.  
Trenton Iron Co., Trenton, N. J.  
**Wire Rope Filler.**  
Broderick & Bascom Rope Co., St. Louis, Mo.  
Ironides Co., Columbus, O.  
**Wire Rope Shields.**  
Ironides Co., Columbus, O.  
**Wire Rope Thimbles.**  
Broderick & Bascom Rope Co., St. Louis, Mo.  
Jackson Mfg. Co., Harrisburg, Pa.  
**Woodboring Machines.** (Pneumatic.)  
Rand Drill Co., New York, N. Y.  
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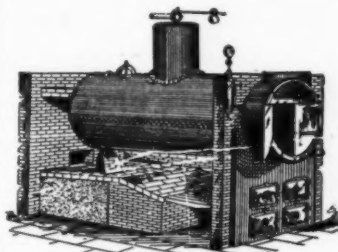


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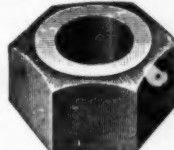
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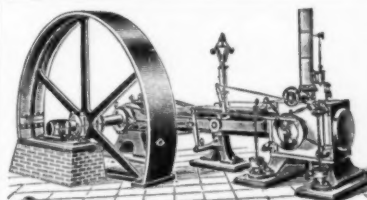
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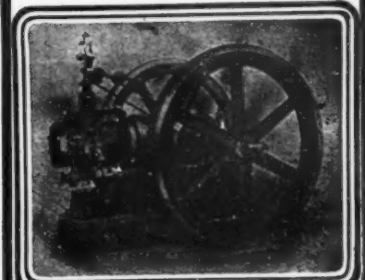
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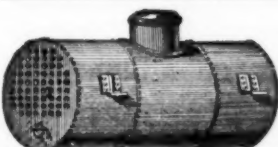
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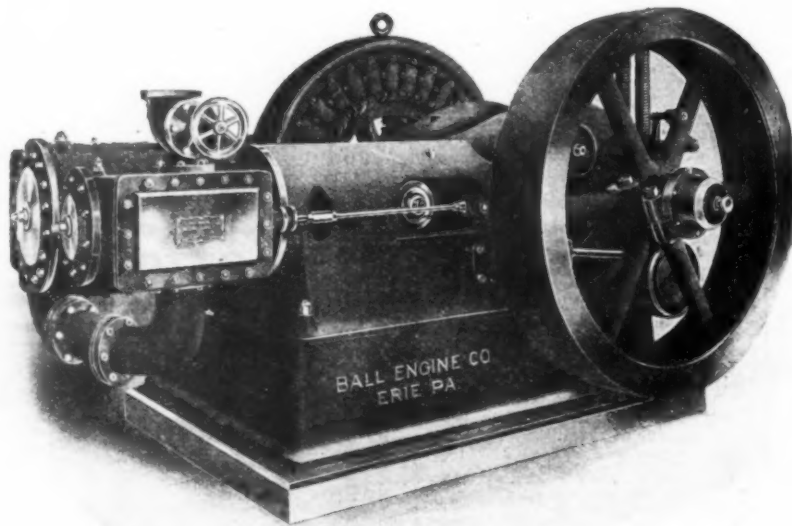
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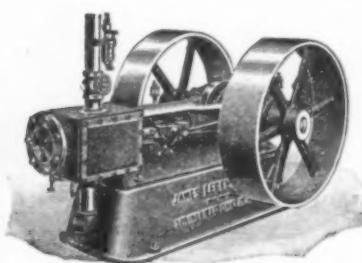
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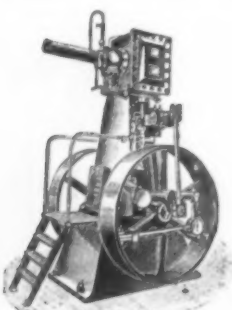
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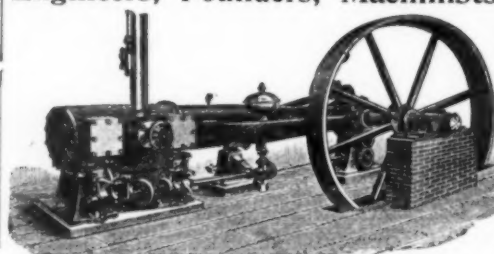
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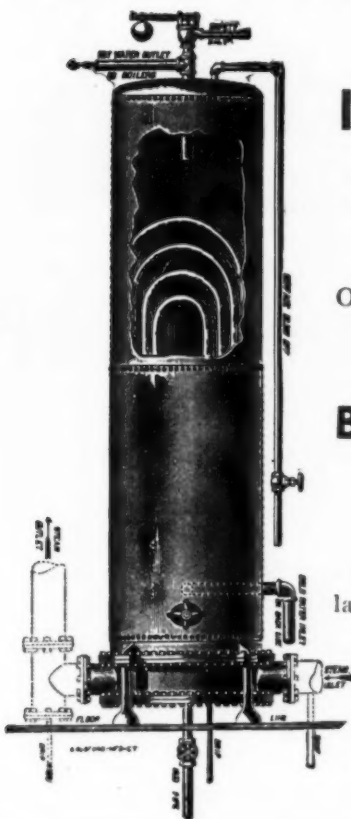
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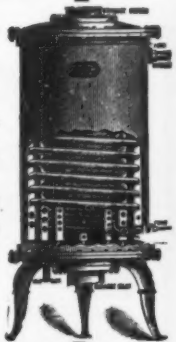
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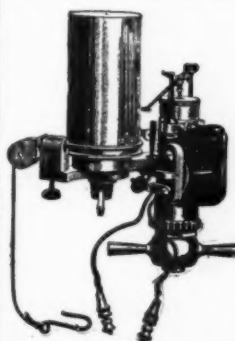
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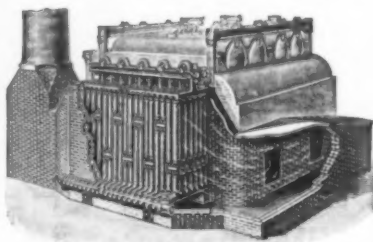
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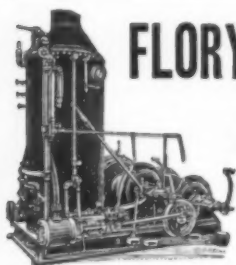
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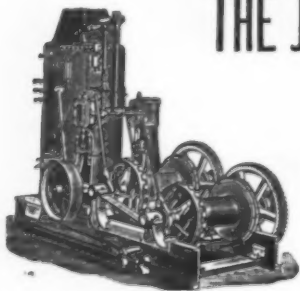
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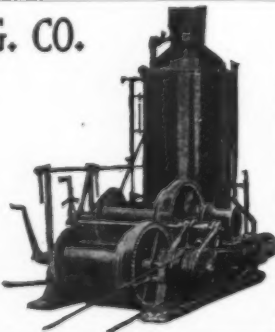
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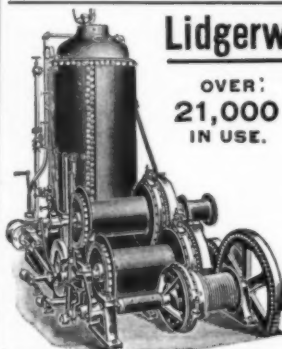
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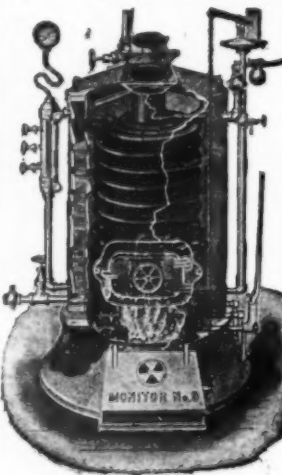
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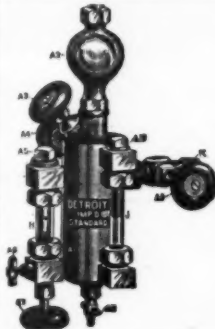
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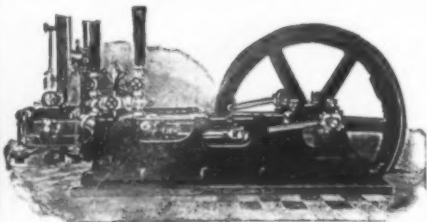
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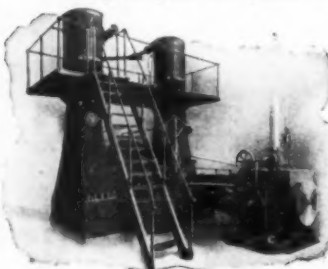
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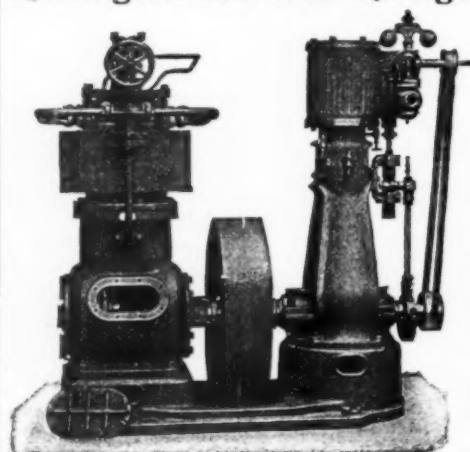
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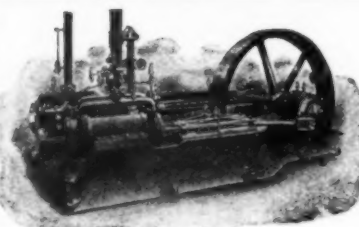
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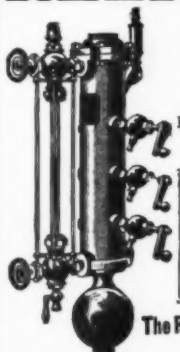
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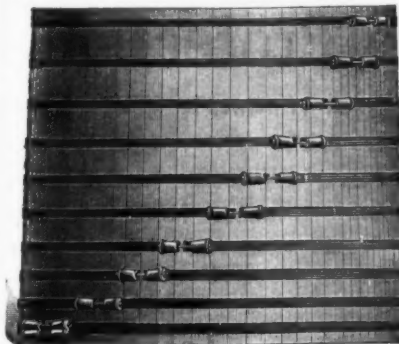


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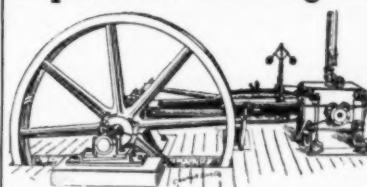
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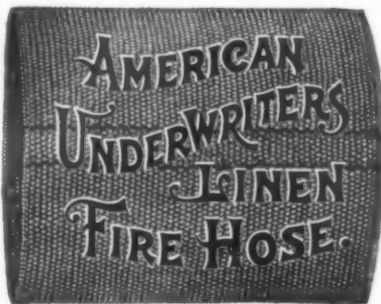
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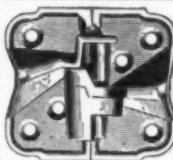
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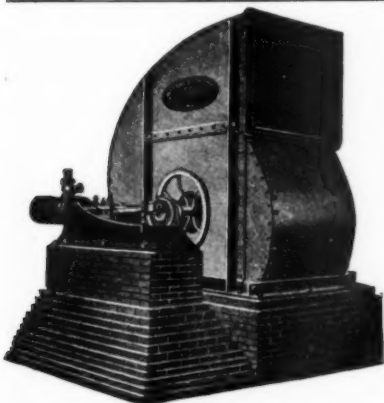
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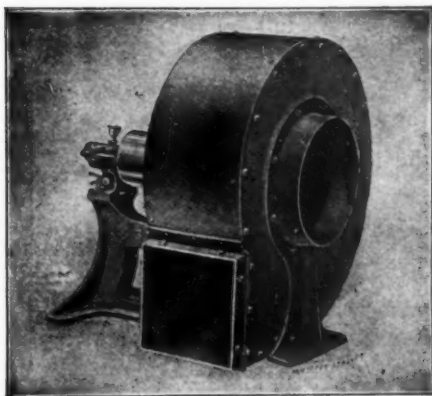
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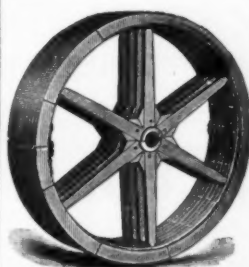
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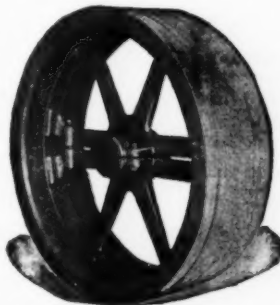
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# Are You Seeking Mexican Trade?

THE 1903 EXPORT NUMBER OF

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The gold standard will without doubt be adopted by Mexico during the present year. The influx of American money due to this promises the greatest development of the railroad and mining properties ever known in the history of the republic of Mexico.

These few facts should suggest the desirability of taking advantage of this opportunity to place at a slight cost a bold announcement before the big buyers of Mexico. A full page advertisement in this issue will pay handsomely.

(Copy and cuts for this Mexican Export Number should reach Kansas City not later than October 15th, but the sooner space is reserved the better the location.

Today is the best time to take up the matter.)

For advertising rates address

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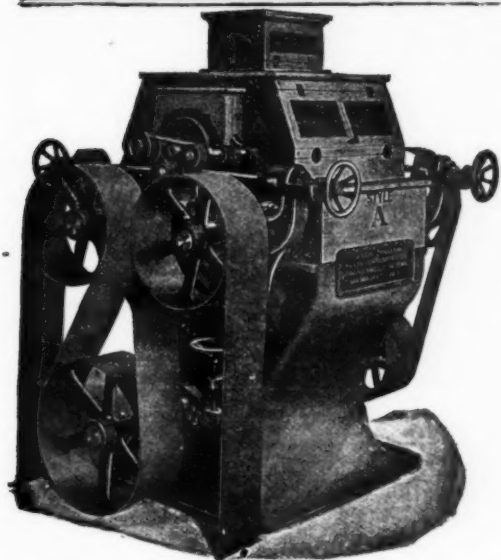
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Branch: 1a, San Francisco St. No. 4, City of Mexico.

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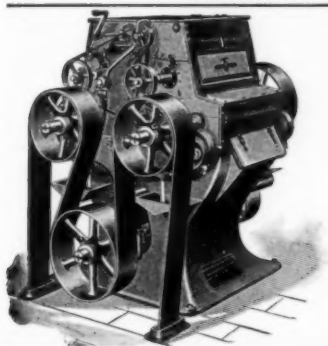
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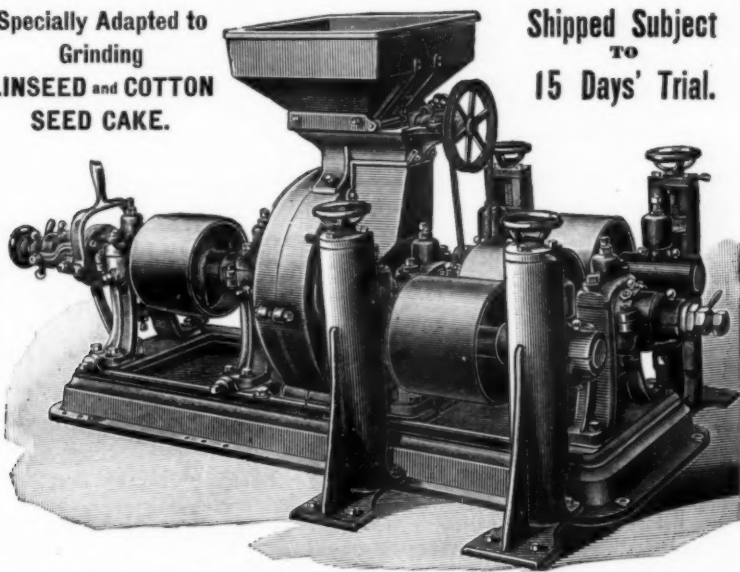
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See our Roofing Advertisement on Page 45.

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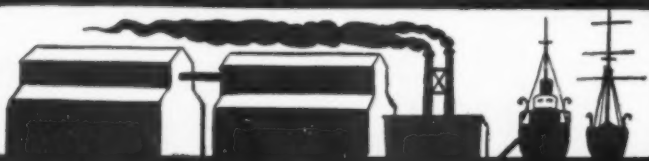
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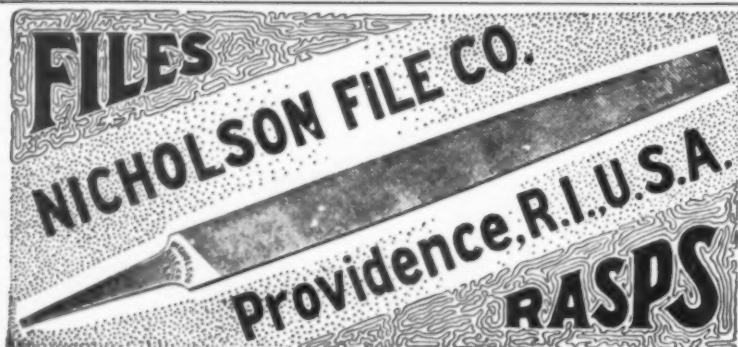


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# MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XLIV. No. 6.  
WEEKLY.

BALTIMORE, AUGUST 27, 1903.

\$4.00 A YEAR.  
SINGLE COPIES, 10 CENTS.

## Manufacturers' Record.

PUBLISHED EVERY THURSDAY BY THE  
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RICHARD H. EDMONDS, President,  
THOMAS P. GRASTY, Vice-President,  
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SUBSCRIPTION, - - - \$4.00 a Year.  
To FOREIGN COUNTRIES, - 25c. 6d. a Year.

BALTIMORE, AUGUST 27, 1903.

### COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week.

For the first issue in the month we should receive copy by Friday Morning of the week preceding.

THE DAILY BULLETIN of the Manufacturers' Record is published every business day in the year for the purpose of aiding manufacturers and business men generally who need to keep in daily touch with the new industrial, railroad and financial developments of the South and Southwest. Supplementing and in connection with the work of the Manufacturers' Record, it is an invaluable aid to all who are seeking business in the South and Southwest, the most wonderfully endowed section of America, where industrial, railroad and financial activity is creating an ever-widening market for machinery of all kinds, railroad equipment and building supplies, and for financial operations, etc., and where the knowledge and skill of the engineer and expert will find their largest field of operation.

The Daily Bulletin is intended simply to cover every day the work of the "Construction Department" of the Manufacturers' Record in reporting every new mining, manufacturing, railroad and financial enterprise organized in the South and Southwest, and it is not intended to be a general daily newspaper. To all who want to be advised every day of every new enterprise organized in that section it is invaluable.

Mr. Van Smith of Charleston, S. C., treasurer of the Southeastern Lime & Cement Co., writes to the Manufacturers' Record as follows:

We are very much pleased with the opportunity you give us to use your Daily Bulletin as an advertising medium. As you know, we have been associated with you for over twelve years, and have in that time grown from a small concern to the largest distributors of building material in the South today. Our operations are confined almost entirely to the South, our principal business being down south of the Ohio and east of the Mississippi rivers, in which territory there is no building operations that escape our notice. Your Daily Bulletin, as an advertising medium, keeps in touch with this territory, and we thank you for the benefit we derive from such service, which is very valuable to us. Immediately upon your offering us this service we saw its advantages and responded promptly. Our "ad." in your columns states just what we are able to do.

### THE SOUTH WARNED.

Commenting upon the absurd use of statistics in promotion of the Southern Educational Scheme and the inclination expressed by one of its expositors toward a seeking of national aid, the Knoxville (Tenn.) Sentinel sounds a clear and true note when it says:

The south can meet its own needs. The south has the wealth and the inclination to do all that is necessary to overcome illiteracy. The south will do it much sooner if interfering hands are not stretched out from other sections and if no appeals are made to philanthropy. Seeking aid from northern rich men is but a step toward seeking aid from the national government, and to this practical revival of the Blair bill we are, and we believe the whole country is, strongly opposed. If that is the meaning of the southern education movement, it might be well to keep a close watch on the same and let southern sentiment regarding it be made very manifest.

Coming from the city which is the seat of the "organization of the propaganda" of the movement, these words are peculiarly significant, and are worthy of careful consideration on the part of the New York Evening Post, which combines with its hearty support of the Scheme the expected but most pernicious interference with questions growing out of the negro problem, upon which the belated and foolish movement for national aid in primary education rests.

### A GOOD-ROADS HINT.

Regret will be felt generally that Mecklenburg county, North Carolina, has apparently, but only apparently, not sustained its reputation as a promoter of good roads. In a small vote the recent election went against the proposition for an issue of bonds for road improvement. The statement is made that there is an overwhelming sentiment in the county in favor of the extension of good roads, but that it was impossible to get the people to the polls. It is further stated that had the vote been taken in connection with a general election the bond issue would have been authorized by a big majority. This statement, which is modified by the facts about what the county is already doing in the extension of good roads, is an indication that, nevertheless, the campaign for good roads has really only begun. It is an unwitting acknowledgment that people are more interested in the question as to whether John Smith or Thomas Johnson shall be supported by public taxation than in the matter of securing first-class highways for their own comfort and convenience and for the enhancement of the value of farm property tending to enlarge the taxable basis and thus to diminish the burden of taxation.

### FARMERS AS CAPITALISTS.

Interesting sidelights upon the possibilities of Southern agriculture appear in an article by Col. J. B. Killebrew on another page of this issue of the Manufacturers' Record. Picturing conditions in the Clarksville tobacco-growing dis-

trict, which covers an area of more than 5000 square miles in six counties of Tennessee and five counties of Kentucky, Colonel Killebrew estimates that the tobacco crop alone brings to the farmers every year between \$4,000,000 and \$5,000,000, and that when in connection with that crop wheat, corn, hay and hogs are raised, the farmers are able to lay aside for investment a large part of the proceeds of the tobacco crop. That this is being done is shown by the fact that the farmers rarely borrow money, and, in fact, are able to lend it; that life insurance varying from \$1000 to \$25,000 is carried, and that many of the farmers have investments in industrial establishments. What these farmers have accomplished is notable, but similar results are within the reach of farmers in other parts of the South.

### FLORIDA'S ANNUAL PRODUCT.

In an exceedingly comprehensive survey of the year's output of Florida's factories, fields, mines and fisheries, the Times-Union of Jacksonville presents the following estimate, based mostly upon statistics of record:

Field crops.....	\$13,219,700
Cigars and tobacco.....	11,724,392
Lumber and timber.....	10,848,403
Other manufactures.....	10,719,201
Naval stores.....	7,824,916
Phosphates and clay.....	6,815,050
Stocks, poultry, etc.....	3,806,367
Fruit, crops, oysters, etc.....	2,884,109
Fish, sponges, etc.....	2,489,110
Vegetable crops.....	2,206,000
Cottonseed products.....	650,000
Hides, skins, furs.....	264,804
Herbs, berries, moss, fibers.....	153,200

Total output.....\$73,605,252

It may be suggested that the five columns of the Times-Union giving the details of these figures would make an excellent document for use in the campaign for immigration to that State. The total output of the year was \$73,605,252, more than \$500,000 greater than the true valuation of all the property in the State in 1890.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 56 and 57.

### THE TEXTILE SCHOOL.

President Lyman Hall of the Georgia School of Technology has been informed that Mr. Allie Culberson of Anniston, Ala., who took a two years' course in the textile department of the institution, has been elected superintendent of the Gaffney (S. C.) Manufacturing Co., and though but twenty-one years old is, on account of the illness of the superintendent, practically in charge of the mill. This is a million-dollar concern which manufactures all kinds of cotton goods and prints, and the success which young Culberson has won is directly traceable to the establishment of the textile school at Atlanta. Southern cotton mills are not only giving employment to thousands of operatives whose condition was once most deplorable, but are also making places for the trained expert in textiles and demonstrating the value of textile schools for the South.

### THE GOVERNMENT AS A CLUB IN LABOR AGITATION.

Shortsighted extremists in organized labor are probably beginning to realize that the agitation turning upon the position of W. A. Miller in the Government Printing Office at Washington may have effects quite different from those intended, if not as far-reaching. For it has suggested an inquiry in other departments of the government service as to the extent of the spirit manifested against Miller, with the consequent emphasis upon the principle that no rules or resolutions of union labor can be permitted to override the laws of the United States. Specially enunciated by President Roosevelt for the information of the public printer, its application has been widened in the statement of the President, for the benefit of the heads of all the government departments, that it is "mere elementary decency that all the government departments shall be handled in accordance with the principles" set forth in the award of the anthracite coal strike commission, "that no person shall be refused employment or in any way discriminated against on account of membership or non-membership in any labor organization." As a result of this action by the President, there has been an investigation, according to the New York Sun, in regard to the influence of labor unions on government work, with some interesting developments as to the methods employed by union men to prejudice officials against non-union men, with a view to the ultimate unionizing of government shops. The publicity thus given these efforts, which have rather an odd complement in the demand that Union veterans be allowed to retain their positions in the New York navy-yard regardless of their ability to perform the work for which they are paid, ought to have an important bearing upon the threatened revival in Congress of the movement for a more stringent application of the eight-hour law in government work. The bill, which, if passed, would limit not only the freedom of action of the employers of the country, but also that of the workmen, the great majority of whom are not connected with the organization which has endeavored to secure the legislation, is confessedly in the interest of that minority organization which by compact action and persistent agitation seeks to overawe timid politicians into making the government a club to further its cause. When the bill was last up before a committee of the United States Senate, James O'Connell, vice-president of the American Federation of Labor, said:

The government in making this bill a law and inaugurating the eight-hour day at this time " " " would be giving an impetus to shorter hours of labor. In saying that, we are stating what we believe to be true. We do not want to convey the idea to this committee nor to the opposition to this bill that our purpose is solely and purely to get an eight-hour day on government work contracted or subcontracted for, but we want the eight-hour day everywhere.

That statement was strictly in accord

with the statement at the same time of Samuel Gompers, president of the American Federation of Labor:

The object is to have this bill enacted into law, so that it may be supplementary to our private efforts to secure a universal eight-hour day for all wage-earners in America.

The Miller case has revealed that organized labor under unwise impressions has not waited for this government club to supplement its private efforts, but has been doing a bit of quiet work on its own account in government departments. In that it has made clear the issue before the American people. That issue is, Shall the power of the general government be employed to limit the freedom of action of the individual American workman, and shall, in case of a failure of that design, organized labor be diverted from its legitimate functions into overriding the laws of the United States?

Few persons can escape self-hanging if they are given enough rope.

#### NEGROES WHO WORK.

The meeting of the National Business League in Nashville, Tenn., on the 19th inst. deserves mention as indicating the right lines in the work of negro advancement. Generally their meetings are called to air some grievance or to make some demand, but this meeting was called for the encouragement of the negro population in industrial and commercial development. The purpose was highly commended by the proposer was highly commended by the better class of white people in Tennessee. The legislature freely granted the use of the Capitol for its deliberations. Every encouragement, aid and sympathy was given by the white people of Nashville. The mayor-elect of Nashville welcomed the delegates in words warm with sympathy, kindness and good wishes. A hope was expressed that it would lead to the development of a higher character among the negroes. The president of the Chamber of Commerce assured the delegates that they would be granted by the white people of the South the fullest opportunities for winning success in the accumulation of wealth and in the advancement of education.

There were representatives at the meeting of shirt factories, mattress factories, produce dealers, lumber dealers, banks, tobacco-manufacturing establishments, etc.

It was gratifying to hear so few complaints urged against the white people. Nearly every delegate spoke of the better opportunities the South afforded the negro than the North, and the encouragement and assistance which they had received from the white people of their respective localities. But two babblements were uttered against "the oppressions" of the white man out of a delegation of fully 1500 representatives of the industrial negroes from every part of the country. This serves to show that that portion of the negro race which wishes to work has no cause for just complaint. It is the loafer, the idler, the fellow who wants the government to come to his assistance, the improperly educated, who want social equality and advantages that their merits do not justify. A working negro is a good negro; an idle negro is the devil's most efficient adjutant.

Mr. Ben P. Hunt, secretary of the Chamber of Commerce of Huntsville, Ala., in a letter renewing the subscription of the Chamber to the Manufacturers' Record, writes:

I am fully aware of its splendid work for the South and all of its varied interests, and

cheerfully bear testimony to its great usefulness since I first knew it, now about twenty years ago. As I have several times written your editor, Mr. Edmonds, the Manufacturers' Record has been one of the most potent factors in the industrial and educational development of the South, and one of the first and strongest and most faithful in telling our own people what was best for them to do and what they should do, and also in letting the outside world know of our natural resources.

#### MEN WHO WORK WANTED.

Wanted—For employment in Chattanooga, 1000 laborers. Apply to William H. Flint, secretary Chattanooga Manufacturers' Association, 527 Broad street, Chattanooga, Tenn. Wages \$1 to \$1.50, according to worth of man.

This notice, which has been inserted in newspapers of Tennessee, Alabama and Georgia, is intended to attract to Chattanooga strong and reliable laborers to be trained for work in machine shops and boiler shops. Negro labor, upon which dependence has been in the past, has become unreliable, and even the needed number of negroes is not available. This advertisement is but one of the manifestations of conditions in the South likely to affect manufacturing and agriculture and other interests seriously, unless a remedy be promptly devised. From many quarters come complaints of a lack of men to do necessary work. For instance, Mr. John Blair McAfee of Philadelphia, having charge of the construction of a portion of the Atlanta-Birmingham extension of the Seaboard Air Line, was recently quoted at Atlanta as stating that with nine men scouring the country for laborers whose transportation charges have been paid, he is employing only 700 men, where he could use 1200 or more at from \$1.25 to \$1.50 a day, and that the great trouble in dealing with negroes is their inability to get over pay day without a tremendous loss of work. About the same time it was announced that the Atlanta Woolen Mills could put to work immediately fifty weavers and twenty-five spinners and cardroom hands, but that search for workers had been unsuccessful, while carpenters and brick masons to complete a new building for the mills could not be had in sufficient numbers. From different quarters come reports at the same time of a deficiency of farm labor due to the migration of whites to mill towns and of blacks to the coal fields, to the lumbering regions, or to railroad construction plants. Even many of the negroes who have been left in the country are becoming more and more unsteady, one North Carolina farmer illustrating the situation in his statement, "This is Saturday, and next Monday when I go out to work I have no assurance that I will have a single hand." He, though, is somewhat better fixed than the Alabama farmer, who contracts with his negroes to send them to town in a two-horse carriage on Saturday and to bring them back in the same vehicle on Monday morning. To these embarrassments in outside operations are added the increasing worthlessness of house servants, and none of them is due to a lack of a sufficient number to do the work, but rather to an unwillingness on the part of thousands to work steadily and to their utmost for a living. This class ranges from those who labor only long enough to meet their immediate necessities and then drift to other fields to the other extreme, the confirmed vagrants, parasites through guile or guilt upon those who are industrious as they can be.

Yet conditions in the South in this respect are superior to those in other parts of the country, especially in the East, where the idleness of a hundred

thousand men in the building trades in New York and of nearly an equal number in the textile industry in Philadelphia, has not only prevented wealth-creating and wealth-distributing operations, but has at the same time been a severe drain upon the accumulated resources of employers and employees. Still, no careful observer of current events can doubt that the South must share more or less in the difficulties of the rest of the country, which will be intensified if steps be not taken at once to overcome them. Local advertisement for labor can result only in temporary relief. The shifting from town to country, or vice versa, as opportunities in either are increased or lessened, will only postpone the evil day. Strenuous action as to fundamentals is demanded. Relief for present necessities and prevention of an accentuation of them in the future are to be had in a cultivation of a public sentiment against the movement which, by limiting artificially the time of labor or the amount of work to be done by the individual, would forbid the worker from doing according to his ability and for the enforcement or the reinforcement of laws making vagrancy impossible.

#### POTTERIES FOR TEXAS.

The farther Dr. Heinrich Reis, professor of economic geology in Cornell University, goes in his investigation of the clays and kaolins of Texas, the greater becomes his interest in them and the stronger his suggestions of a valuable industrial opening for the State. He has found in every section of the State clays which make an excellent brick of beautiful color, and near San Antonio, a deposit of glazing clay as good, in his opinion, and quite as extensive as that near Albany, N. Y., which is shipped all over the country to be used in giving the finish to stoneware. Dr. Reis found in operation at Denton small potteries making stoneware, which were sending to Albany for their glazing clay. Only one of the proprietors had heard of the San Antonio deposit, and there was considerable skepticism regarding its value, but Dr. Reis thinks that not only ought all the stoneware used in Texas to be made there, but also that a good export trade in it could be built up, while unexcelled opportunities are offered for the manufacture of fine china.

Dr. Reis' work is in the interest of the Texas exhibit at the St. Louis Exposition. He has gathered about thirty-five samples of clays and kaolin, and has induced a friend of his who is a potter at Trenton, N. J., to work up some of the finer kaolins into articles of ornament and use. The exhibit at St. Louis, judging from Dr. Reis' enthusiastic reports, ought to attract the attention of potters to Texas, but in the meantime the Texans themselves might do well to turn a stronger hand to pottery.

#### LOUISIANA SALT.

A difficult engineering feat, the sinking of a shaft through an 80-foot bed of quicksand at Belle Isle, La., has been practically concluded, according to statements of officers of the American Salt Co., operating at that point, and it is estimated that the completion of the shaft will almost double the salt output of Louisiana. The quicksand lay above the main strata of rock salt, which has a depth of more than 1000 feet, and the successful sinking of the shaft makes accessible an immense deposit, which it is expected will widen the operations of the company and an increase of the

importance of Louisiana salt in packing centers of the world.

#### The Southern Farm Magazine.

Here and there in the South canning factories have been established, but nevertheless nearly every grocery store from Virginia to Texas carries a supply of canned goods packed elsewhere. In the aggregate, the South spends millions of dollars annually for canned goods, while its own fruits and vegetables often decay because in many places the production is greater than the demand for the fresh products. The establishment of canneries is a remedy for this, as it not only extends the time of the employment of men and women beyond the mere gathering of the fresh crops for market, but carries the market for the product far into the fall and winter. It adds wealth to the community in several different ways. Wherever canneries have been established only the most untoward circumstances have prevented an expansion of the industry. A striking illustration of the benefits accruing to a community from the industry is given in an article by Frank B. Webb in the September issue of the Southern Farm Magazine, describing the growth of tomato-canning in Harford county, Maryland. Last year 9,300,000 cases of canned tomatoes were packed in the United States, 4,500,000 of them in Maryland, and nearly 1,000,000 of these in Harford county, which has 150 canneries, employing from 25 to 100 persons each, the total number thus employed in the county being between 6000 and 7000. The income to the county from the packing averages from \$1,500,000 to \$2,000,000 annually. The article describes the development of the system to its present proportions, explains the methods now prevailing and describes the benefit derived by the growers, the packers, the pickers and the brokers. It tells of an industry which may be duplicated or imitated for other crops in many parts of the South.

Another suggestive article deals with peach-growing in Georgia. It is by Mr. P. J. Berckmans, president of the Georgia Horticultural Society, largely interested himself in peach-growing and qualified by experience to emphasize the points made by him about peach-culture and its profits. Col. J. B. Killebrew contributes, in addition to his wonderfully practical suggestions for the month for farmers in all parts of the South, an inspiring article for the young men of the South, urging them to acquaint themselves with the facts about their country, and to prepare themselves to realize fully their advantages. Other articles deal with truck farming in Florida, East Texas tobacco, the opportunities of the Southern farmer and the need of more good farmers in the South.

Editorially are discussed Southern independence in food supplies, and, in that connection, the chance for cotton-growers in the good prices now being paid for cotton, the various movements for diverting immigration to the South, and suggestions about the parts which newspapers may play in that movement. In other departments are hints for various members of the country family, and live comments upon present-day tendencies in politics and philanthropy, with a sharp protest against the inclination toward mendicancy in education.

The Southern Farm Magazine is published monthly by the Manufacturers' Record Publishing Co., Baltimore, Md. Price \$1 a year.

The sales in the Joppa (Mo.) district during the week ended August 22 were 9,514,970 pounds of zinc ore and 740,160 pounds of lead ore, of an aggregate value of \$186,210.



# BONDHOLDING AND STOCKOWNING FARMERS.

By COL. J. B. KILLEBREW.

[Written for the Manufacturers' Record.]

The outlook for business in the South this fall has never been brighter. Take as a fair average the condition of a part of Tennessee and Kentucky embraced in the Clarksville tobacco district. With the exception of the wheat crop, all other crops are large in acreage, and will be bounteous in yield. The hay crop has just been harvested in good condition, and it is one of the largest that has ever been harvested in the State. The writer was invited a few days ago to take a trip through the Clarksville tobacco-growing region, one of the most noted of all the tobacco districts of the United States, both for the quantity and quality of its product. The acreage is large, and the crop is the soundest and best and most highly developed in leaf that has been grown for many years. In examining more than 250 acres, scarcely a worm-eaten leaf or one damaged by field fire was found. The plants almost covered the ground completely, and there was a uniformity in growth and in the spread of the leaves that is very unusual.

Never in the history of tobacco-growing in the district, which now extends through a period of 110 years, have so few horn worms made their appearance. Up to the 20th of August they would not average in number one worm for 100 leaves. This will have the effect of producing perfect leaves. The weather, too, has been all that the most critical could desire. The rains have been just sufficient to develop the plant to the greatest perfection, and now the nights have turned cool, while the days are hot, just such conditions as favor the accumulation of gum, nicotine and other substances that make the Clarksville tobacco so well known and so much sought after in the European markets.

The Clarksville tobacco-growing district covers an area of something over 5000 square miles, and embraces the counties of Montgomery, Robertson, Cheatham, Humphreys, Dickson and Stewart in Tennessee, and Simpson, Logan, Todd, Christian and Trigg in Kentucky. The average quantity of tobacco that has been grown in the district for the past four or five years will amount to between 65,000,000 and 70,000,000 pounds annually. The acreage varies from 75,000 to 98,000 annually.

The tobacco crop of the district brings to the farmers every year between \$4,000,000 and \$5,000,000, and when the farmer is successful in growing a good wheat, corn, hay and hog crop he can, by a not parsimonious economy, lay aside for future investments a large proportion of the proceeds of his tobacco crop. The farmers of this district, with few exceptions, have their bank accounts as regularly posted as if they were merchants. There is this difference, however, that they rarely borrow money, while the merchants do.

The live-stock interest is increasing at a satisfactory rate in this district. Among the best farmers the quantity of live-stock has been augmented fully 50 per cent. during the past five years. Pork, bacon and early lambs, besides many hives, now go to market and help to replenish the farmers' treasury. In a recent article the writer expressed the opinion that the farmers of a portion of the tobacco-growing district were lenders of money to a large amount. More recent inquiries have confirmed this statement, and, in addition, nearly every prosperous farmer has his life insured for amounts varying from

\$1000 to \$25,000. Many of them own bonds and stocks in industrial establishments.

In traveling through the country one will be surprised at the amount of reading matter distributed through the agency of the rural routes. In neighborhoods where only two or three daily papers were taken three years ago, there now go from thirty to fifty. The best magazines find a liberal patronage also. Telephone service is supplied to nearly every neighborhood in the largest tobacco-growing counties. The highways are being improved. With good roads will come better schools and more intelligence. The country is the fountain of conservatism and patriotism. Every effort should be made, therefore, to make it so attractive that the farmers will not only not leave it for city life, but the city people will seek it for profit, as well as for retirement and leisure and freedom from the wrangles of the market and the hotheds of anarchy and fanaticism.

In fact the writer, though an extensive traveler in the United States, knows of no part of the Union where the country people are enjoying more thrift and prosperity than those living in the Clarksville tobacco-growing district.

Nashville, Tenn.

## THE BIRMINGHAM DISTRICT.

New Furnaces and Improvement of Existing Ones.

[Special Cor. Manufacturers' Record.]  
Birmingham, Ala., August 24.

The award of the miners' arbitration board gives the miners pretty much all they wanted; in fact, it seems to have been all that the miners ever contended for save the eight-hour day. The rate of pay was advanced two and one-half cents, making the minimum forty-seven and one-half cents per ton for mining and the maximum fifty-seven and one-half cents on a sliding scale. The operators must grant two weeks pay days, and commissary checks are not transferable. The scale for narrow work was also increased. Ed. Flynn, president of Alabama District No. 20, United Mine Workers, was appointed with Capt. T. G. Bush, president of the Alabama Consolidated Coal & Iron Co., to arrange differentials as to pick and machine work. A minimum of twenty days was fixed as a month's work.

The reduction of the price of iron made last week has had the effect of stimulating buying. More orders were taken last week than for six weeks previous. The scale is now \$12.50 for No. 1, \$12 for No. 2, \$11.50 for No. 3, \$11 for No. 4, \$10.50 to \$11 for gray forge. The higher grades are not so plentiful, though there are at least 150,000 tons of all kinds on the yards. The grades below No. 3 are the most in hand, and if there is to be any cutting, which few expect, it will fall to these classes. Gray forge is selling to some extent, as is 4 and 3. The inquiries are heavy, and indicate that the buying is going to pick up even more. Many buyers seem now to believe that the price is at the bottom, though some are holding off for less. The fact that there is not a week's supply in the yard of any of the melters is a strong card for the maker just now.

Orders received lately carry with them instructions to ship quick. This can be done from the increased output and the iron on the yards. It is now believed that the business will so pick up that all the iron on the yards will be cleared up soon.

The new furnace of the Alabama Con-

solidated Coal & Iron Co. was put in blast last Saturday, and is now making iron. This is the highest development of furnace property in the South. The stack is eighty-six feet high, and has a 19-foot bosh. The latest things in skip hoists and quick loading apparatus have been put in. The output will be well up towards, probably fully 100,000 tons of iron a year. With this furnace and its coke ovens the company will have an annual output of 160,000 tons of iron, 600,000 tons of coal and 250,000 tons of coke. No. 2 furnace of the Republic Steel & Iron Co. at Thomas was blown in last week; also No. 1 has been blown out for repairs. The new furnace will make at least 200 tons a day. New stoves and new engines have been put in and both furnaces supplied with the latest in skip hoists. The putting in of these furnaces will greatly increase the output. The first will make 250 tons a day, and the latter 200, giving just here several hundred tons a month above what has been made for some time. This does not take in the output of the furnace at Holton and increases at most of the old stacks. The Philadelphia furnace at Florence is making 200 tons a day, and the Anniston stack of the Woodstock Company is making as much.

The supply of raw material is up to the average, it is said. A representative of the Tennessee Coal & Iron Co. said today that their mines, both in ore and coal, were coming along well, and that there was not much delay in getting what was needed. The brown-ore mines at Russellville are turning out a great deal of ore. One of the mines there of the Sloss-Sheffield Company produced one day last week 1215 tons. Mr. Henry Badham, president of the Bessemer Land & Improvement Co., says the Bibb county mines of this company are doing well, and that new openings are being pushed. The coal is very fine, and is among the best in the State for rough handling. R. R. Stobert and others will open new mines in Walker county, and the Lucile mines, which have been in litigation, will be worked, all trouble about them having been arranged. The officers of the new company which will operate them are W. T. Simmons, president; C. S. Simmons, secretary and treasurer; and T. H. Moore, general manager. Messrs. Simmons are wholesale grocers.

The Birmingham Southern will lay a belt line around the city of Ensley as soon as the city council designates the route. A committee, therefore, has been named to look out the best way.

The proposition to organize a water commission to look into means of providing the Birmingham district with water is meeting with approval. At a recent meeting of the Ensley city council a resolution was adopted commending the plan.

The repairs on the furnace of the Tennessee Company at Bessemer have about been completed, and the plant will be put to work early in September. The cost of the work done on it was over \$30,000. One of the Sloss-Sheffield furnaces at Sheffield, now out for repairs, will go in about September 15, giving this company seven.

The new works of the Southern Sewer Pipe Co. at North Birmingham will probably be ready for work by the first week in September. This plant was burned out some weeks ago. The company has orders for a big lot of soil pipe for New Orleans. The Southern Railway is preparing to build tracks at North Birmingham to reach new plants there.

Great progress is being made on the furnace of the Alabama Steel & Wire Co. at Gadsden. Two of the three blowing engines are in place, and the steel frame of the gas-house in place. The engine con-

nections will be made right away, and as soon as the incline is up the furnace will be fired up. For half a mile over the field there building is being rushed.

Henderson Bros. of Gunter'sville are opening coal mines at Carlisle, on the Nashville, Chattanooga & St. Louis Railway. The seam opened twenty-eight inches, and gets larger as it goes down. The coal is clean and clear of slate.

Sheffield is booming. Since beginning work the Sheffield Coal & Iron Co. has spent there \$1,000,000, and is still improving. The report that the rolling mill would shut down permanently is denied. The oil mill has been improved in a month to the cost of \$5000. A party of officials of the Sloss-Sheffield Steel & Iron Co. visited there last week and took a look over the property owned by the company. President Maben and Vice-President McQueen were in the party. H. W. L.

## The Pig-Iron Market.

In their weekly report Matthew Addy & Co., Cincinnati, say:

"The past week in pig-iron has been a return to the good old times. There has been a great deal of buying, and the furnaces which have been looking into the future with apprehensive and gloomy eyes have been much cheered by the new orders which have come to them, and which will very effectually prevent any more piling of iron in stock piles for the immediate present. Fortunately, nearly all the orders call for quick shipment. Some little iron has been sold for delivery into three or four months next year. A good deal has been sold for shipment over the balance of this year, but by far the greater portion of the new orders are for shipment over the next thirty days. This means that consumers have come to the end of their string. They have reached the place where further supplies of iron must be obtained or work stopped. And the more small orders that are booked for prompt delivery the more orders will presently have to be duplicated. From the buying it is evident that consumers are conservatively covering their actual needs.

"The main event of the week, of course, was the reduction on the part of the Southern Association to \$12 for No. 2 foundry. This was the figure at which buyers, when the decline began, sentimentally fixed their hopes. This was the price at which iron was selling when the great boom of 1902 started. From \$12 the market soared in February to \$25 in September. It was stationary there for several months, and then slowly receded to the point where it started. The consumers who wanted \$12 iron again now have it, and they have responded to the new quotation in a highly satisfactory and encouraging way. The standard brands of the Southern ironmasters are once again in the market on a competitive basis, and they have been bought freely. Everything has been in demand, from 1 foundry iron down to Gray Forge.

"Northern iron has been in as great demand as Southern. Several agricultural implement shops have bought heavily of the Ohio metals, their orders running into the thousands. Malleable, too, has continued to be active. The Northern furnaces have met the price on Southern iron, and are selling on a parity with \$12 Birmingham.

"Of course, the question that now arises is as to the strength and permanency of the present buying movement. All this month the buying movement has been growing in force. The necessities of the furnaces have been relieved and their position has been much improved. In fact, the situation now is in a great deal better shape than it was July 31."

## INDUSTRIAL POSSIBILITIES OF NEW ORLEANS.

[Special Correspondence Manufacturers' Record.]

New Orleans, La., August 24.

What New Orleans is doing today in the way of manufactures is believed to be little more than a promise of the rank it will take as an industrial center. While there is a wide variety in the industries now here, and in some lines an important position has already been secured, there are so many reasons why the lines should be extended and the total products vastly increased that it is believed the opportunities for profitable operations in many kinds of manufactures are sufficiently attractive to promise a very great expansion of the industrial interests of New Orleans at no greatly distant date.

Complete statistics are not available. The figures furnished by the census of 1900 are the only ones at hand, and they have generally been regarded as greatly underestimating the true conditions. According to those figures, there are 143 different industries here, with 1524 factories, a capital of \$46,000,000 was invested, and the value of products was put down as \$63,500,000. The number of employes was given at 19,435.

A number of new industries have been established since that time, and there has been some enlargement of the capacity of established plants, and the guess is made that the present value of manufactures here may approach the \$90,000,000 mark.

In a survey of the industrial field here suggestions as to what may be done are as interesting as the record of what has already been accomplished. Indeed, it is declared that there are no serious obstacles to the establishment here of almost every kind of factory outside of the heavier iron works, which necessarily belong to a coal and iron center. In the manufacture of everything else New Orleans possesses advantages equal to those of almost any other city, and in some respects the advantages are superior. There is plenty of labor here of all kinds, skilled and common, a special advantage in the way of skilled artisans being provided by the large admixture of the Latin races which is found here, whose workmen, male and female, have notably deft fingers.

In the manufacture of cotton products and in every kind of woodworking New Orleans is a pre-eminently advantageous point, and it would seem inevitable that a very large expansion of these industries must occur. There are vast territories of hardwood tributary to New Orleans, and in addition, this is one of the largest mahogany markets in the world. This wood, imported here in logs, is made up into shapes for use in furniture and other factories elsewhere, but at this time almost none of it is turned out as a finished product in New Orleans.

With an abundance of raw material and labor, the other features entering into a question of the profitable operation of manufactures are fuel and markets. Alabama coal can be had here at the present time at \$2.50 to \$3 a ton. Some stress is laid upon the advantage that will ensue on the completion of the Warrior river locks, when Alabama coal will be shipped from the fields and loaded on barges to be brought directly to New Orleans. It is by some considered questionable whether the manufactures of New Orleans will gain any special advantage from this, as when coal is loaded on cars it can be shipped to any desired location. However, the advent of Alabama coal barges will be of unquestioned advantage to this port, as ships may load their coal without rehandling.

There is another advantage in the way

of fuel that seems to have been somewhat misunderstood in the early days of its discovery here. Fuel oil is admittedly a great convenience, and its use is advantageous on account of economic handling. Furthermore, it increases the boiler power some 25 per cent. As to whether there is a monetary advantage in using oil at contract prices is, however, a mooted question; opinions differ. Nevertheless, the increased power of fuel oil and the conveniences of its use cannot be otherwise than an advantage when considering the possibilities of New Orleans as an industrial center.

As for markets, New-Orleans-made products already have a very wide sale. There are numerous manufacturers of sugar machinery in New Orleans, and the planters of the West Indies, Mexico, Central and South America are largely supplied from this city. New Orleans cotton goods are likewise sold abroad, even as far away as Australia. Numerous other New Orleans products find markets to the South, as well as throughout the United States, and with the opening of the isthmian canal the field will be almost illimitable.

At the present time sugar-refining is the most extensive industry. The branch of the American Sugar Refinery employs 1000 men and refines 1,500,000 pounds of sugar a day. New Orleans stands next to New York and Philadelphia as a sugar-refining center, with a yearly output valued at some \$23,000,000.

In cotton manufacturing the industry may properly be called merely in its infancy. There are four mills here at present, two of which manufacture yarns only, and the total annual product of the mills amounts to not more than \$1,750,000 to \$2,000,000. The Maginnis Mills, which manufactures brown sheetings and drills, has 40,752 spindles and 1216 looms. The Lane Cotton Mills, which manufactures plain and fancy denims, cottonades and stripes, now has 17,000 spindles and 382 looms. An addition to this plant is being built which will add about 25,000 spindles and 700 looms. The product of this plant is marketed all over the United States, and there is a growing export trade, some of the goods going to Australia, Palestine, Europe and to the West Indies and South America. The industry at present employs altogether 1600 hands, and when the Lane mills are finished there will be an addition of 800 hands.

The aggregate of the cotton goods output is exceeded by several other articles at present. For instance, in the manufacture of bags, particularly those made of jute, New Orleans turns out between \$3,000,000 and \$4,000,000 worth a year, supplying not only the local trade, but having a business that extends throughout the West and Northwest portions of the country.

Clothing is another important line, the annual product running between \$3,000,000 and \$4,000,000. New Orleans jeans, linens, overalls, jumpers, shirts, etc., are shipped all over the country. There is an abundant supply of female labor here, so that this industry is found to be very profitable, and is capable of large extension.

In the manufacture of cottonseed-oil products New Orleans is a leading center, the value of the annual output being set down as between \$2,000,000 and \$4,000,000.

The industry of hulling, cleaning, polishing and otherwise preparing rice for the market is one that runs up into the \$3,000,000 mark, and with the continued development of the rice-growing industry

in Louisiana and Texas, the importance of New Orleans as a rice-milling center must be largely increased.

In the manufacture of cigars, cigarettes and tobacco an important industry has been built up, and New Orleans brands are known throughout the country. New Orleans beer is also an important product, and an extensive export business is being established.

In the way of woodworking establishments what industries are here hardly more than indicate the opportunities. There are four furniture factories, all making money and frequently increasing their capacity, though they cannot supply more than 10 per cent. of the local trade in their line. It is declared that these factories would welcome the establishment of others, so that every line could be represented. The factories now here are fully occupied in making cheaper and medium priced goods, and they realize that it would be an advantage to this market to have other lines filled, so that purchasers could ship out carload lots. Manufactures of chairs, fine cabinet work, fine mahogany and cherry bedroom furniture, etc., could be very well established.

While New Orleans has on 'towards 100 successful wagon shops and carriage factories making goods to order, 75 or 80 per cent. of the vehicles used in this city are made elsewhere. There is no factory here running exclusively on stock or custom work. It is declared that a wagon factory would pay, as also a buggy or carriage factory.

There are sash factories here, but they are altogether engaged in order work, and it is declared that there should be a greater number with larger capacity.

There are two plants making screen doors and windows, and the field for these articles is widening as people become to more fully appreciate the comfort of their use. Broom and brush factories should be established here, it is said, as the Mexican fiber can be delivered here cheaper than anywhere else in the country, and wood is thrown away that could be utilized for handles. For example, an advertisement is running in the papers to the effect that mahogany, stove lengths, for fire wood, may be obtained by calling at the mill.

The building of cypress tanks is an industry of some importance, and is being constantly developed. The market for these goods is widening, a large lot having just been shipped to England. A very successful coffin manufactory occupies a block and a half for its site. An interior decorating company has a plant for the manufacture of interior hardwood-finish and artistic furniture, and the business is being constantly developed. An opportunity exists for the manufacture of ladders and woodenware generally, no institution of this kind being located in this vicinity, and it is declared that the home consumption would be sufficient to take care of the product of one or more such factories.

Other lines of woodworking are factories of cross-arms for telegraph and telephone poles, which are shipped out by carload lots. There is one of the largest crosscutting plants in the country located here also, as well as two others of smaller size. With the growing scarcity of timber, the crosscutting of cross-ties, bridge timbers, piling, etc., is very much increased, and this industry is assuming proportions of importance.

There are a large number of fertilizer factories here that are very successful, but which do not begin to fill the demand for their products. Louisiana has one of the greatest sulphur mines in the world, Florida phosphates are easily accessible,

and cottonseed-oil plants make all the required materials cheap and plentiful. As sugar lands require heavy fertilization, there is a constant and never-ending demand for these products.

It is pointed out that an opportunity exists for the establishment of a manufactory of small gasoline launches, a great number of which are now brought here and sold, and which, it is felt, should be made here. With a coast extending from Florida to Mexico, it is considered that a great opportunity for such a factory exists, whereas there is none here at present. There are two flourishing shipyards, making tugs and coastwise steamships, and the industry in that line is being extended. The government dry-dock recently established here has been used to such an extent that it demonstrates the desirability of a large mercantile ship dock and shipbuilding plant at this port.

In iron-working there are numerous large establishments here for the manufacture of heavier machinery, boilers, etc., but an unoccupied field exists for other lines; for instance, a foundry for the manufacture of small castings is suggested. At present manufacturers who want small pieces of casting have to send away to Chattanooga and Birmingham, no small iron foundry existing here. A brass factory conducted on the lines indicated has proven very successful. A stove foundry here would also pay. Fifteen hundred tons of scrap iron are shipped out of New Orleans every year that might be utilized. As for the market, one jobbing house here sells 10,000 stoves a year.

The absence of a factory for electric motors suggests the possibilities in that line.

The canning industry, already well established, is susceptible of much greater development. New Orleans shrimp, oysters, okra, artichoke, preserved figs and syrups are beginning to have a world-wide fame, and the present canners are unable to supply the demand. The field might be widened by including tropical fruits, pineapples, etc. In the lines already covered the opportunity exists for a great expansion of the business.

The New Orleans Cold-Storage Co. has within recent years been established here, and now occupies a five-story building covering one-half a city block. It is proposed to take in the entire block, 300x300, to be covered by the five-story building. This improvement is of great advantage to shippers.

The manufacture of boots and shoes is there being ten factories, several of which becoming an important industry here, are of good size. New Orleans shoes are being shipped to Denmark, France and other foreign countries, and this is becoming noted as an advantageous market. New Orleans shoes being among the cheapest and best produced. On account of the moist climate, leather here does not get hard and is easily worked. This advantage applies to saddlery and harness manufactures, and the three large establishments already here have been very successful. The product is sold as far away as Richmond, St. Louis and Cincinnati, and is in increasing demand.

A cotton and leather belting factory is mentioned as an industry that would pay here on account of the supply of raw material and the demand for the goods. It is also suggested that a tannery would be a good investment, as this has been for years a great market for hides from Texas, Cuba, Central and South America.

What is being done in the way of chemical products indicates large possibilities. There is a very successful manufactory of perfumes, the head of which is a man educated in France. The prod-



ucts have been sold all over the country, and have a good reputation. Pharmaceutical products, fluids, extracts, etc., are also made here in considerable quantity.

The proximity of the sulphur and salt deposits of Louisiana in territory adjacent to New Orleans, and the cheap fuel to be obtained here indicate a possibility of the establishment of a great chemical industry, such as is at Syracuse and Detroit, Mich., neither of which points have anything like the advantages New Orleans possesses. Sulphur as the base of sulphuric acid, one of the most important articles in commerce and the industries, suggests a wide field of development itself, and the manufacturers of saline products have built up large towns in England, and they will unquestionably be utilized here to the advantage of New Orleans and those engaged in the industry.

There are two paint factories in New Orleans, both of which are successful, the output of which is increasing, and yet they do not produce 15 per cent. of the paint sold in New Orleans. They make all kinds of paint, and export a considerable quantity, indicating the existence here of a very large field. A can factory for paint factories is indicated as an industry that would succeed. There are no machine-chased cans made here, and the packers of New Orleans and vicinity, who use millions of cans a year for oysters, shrimp, figs, etc., in addition to the demand for cans for paint, axle grease, compound lard and molasses, would form the basis of a very successful industry. The cans are now purchased at Chicago. It is declared that the local consumption would be enough to occupy a plant with \$100,000 capital, and it is stated that the local packers would make contracts in advance to anyone who would come here and establish a can factory.

There is also a field for the manufacture of axle grease and rosin products, this being a good rosin and naval-stores market. One factory here in that line is entirely successful. Owing to the cheapness of turpentine, this is an exceptionally good place for varnish factories, one plant in that line being very profitably conducted here now. There are two distilleries here now producing alcohol and high wines from fermented molasses, and they have done remarkably well, having a decided advantage in economy in making alcohol from molasses condemned as unfit for shipment.

There being an abundance of suitable clay just across the lake, manufacturers of clay charcoal furnaces who are established here are unable to supply the demand which comes to them from all over the country. This is already the greatest market in that line in the United States, and is susceptible of much greater development.

The brick factories in this vicinity are also unable to supply half the demand, and the fine clay available and other conditions present makes the brick industry a very attractive proposition.

There are four institutions here that make mattresses and spring beds. This being the headquarters for Spanish moss, the four plants devoted to ginning, cleaning and shipping the product are busy and prosperous. Mattresses are made of Southern moss and lint cotton, and their output has been tripled in three years. It is declared that other establishments would do equally as well.

There is no flouring mill here, and it is declared there should be several. The manufacture of crackers, biscuits, etc., is an important industry here, the yearly output amounting to more than \$2,000,000. As a primary market for green coffee

New Orleans has been an important and improving point, and the roasting and grinding of coffee has proven very profitable. There are now here eight large establishments roasting, grinding and packing coffee, and their product is known all over the country, and the demand is so great they are unable to fill the field.

Pianos are made here, and the industry is in its infancy. A ready sale for the output is always assured. There are two important jewelry factories here, both of which are prospering, and in one of which a large trade in the manufacture of silverware has been built up. Some of the wares produced are of the most artistic design and finish.

There are eleven establishments in the manufacture of artificial flowers, girls from the French families being occupied. The output is not great, but the industry is an interesting feature of the situation.

The National Enameling Co., a branch of the New Jersey corporation, has had a very successful existence here, having increased by several hundred per cent. the output of the plant they purchased. They now own half a square of land, and are erecting a magnificent factory building, with switch tracks and all conveniences.

An asphalt-roofing industry has been established, which also manufactures coal-tar products. It has recently been announced that a company owning a deposit of asphalt in California will establish a refinery here to produce asphalt for paving purposes.

Acetylene-gas machines, prize-winners at the Charleston Exhibition, are manufactured here, and are being sold throughout this section.

Several trunk factories here have developed an important industry in their line, the output having been doubled in the past two years. An umbrella factory has been successfully established, the goods being sold all over the country.

Some of the wants mentioned include a modern bookbindery. It is declared there is enough local business to support a plant employing 300 hands. There are several successful establishments here, but they are not competitors with the large metropolitan plants of the kind it is suggested that New Orleans could support.

This being the nearest point to the Mexican rubber fields, it is mentioned that a rubber-goods factory should be established here.

One of the important committees of the New Orleans Progressive Union is that devoted to looking after the manufacturing interests of the city; R. McWilliams, chairman. It is spreading the fame of New Orleans as an attractive site for all kinds of factories, and never omits to mention that New Orleans exempts factories from taxation till 1910.

ALBERT PHENIX.

#### Tom Richardson in the West.

At the Trans-Mississippi Congress at Seattle Mr. John H. Kirby of Texas, its president, and Mr. Tom Richardson, manager of the New Orleans Progressive Union, have been holding up the advantages of their sections. On the way to Seattle Mr. Richardson had a few words to say at Portland, and the Oregonian of that city thus describes him:

"He has a lean, wiry figure, a strong angular jaw and a pair of brown eyes which literally glow with enthusiasm. He is a Southerner with all the enthusiasm of a Westerner, and he gives the lie to the impression that men from the Sunny South are lazy and languid. Facts and figures roll off his tongue with surprising readiness, strung together with epigrammatic remarks, and his whole conversation is energized by his confidence that

New Orleans, one of the oldest cities in the United States, has begun her second youth. If you once hear Colonel Richardson begin to talk you will enjoy it so much that you will not wish to interrupt him, even if he gives you a chance."

#### PEARL-BUTTON FACTORIES.

##### Suggestion of Opportunities for Them Near Florence.

Mr. Thurston H. Allen of Florence, Ala., in a letter to the Manufacturers' Record, writes:

"I notice in your issue of the 20th inst., under the heading, 'For a Pearl-Button Factory,' that the secretary of the Louisville Commercial Club writes to the Manufacturers' Record regarding the project for a factory to make pearl buttons from mussel shells.

"In behalf of the Business Men's Association of this city, I would like to call your attention to the same subject, and present the claims of Mussel Shoals, in the Tennessee river, nine miles east of this city.

"These shoals are nineteen miles long, and under every bar forming the shoals is a large deposit of 'live' mussel shells. There are thousands of tons of them, and they have been pronounced by those competent to judge the very best for the purpose. They are easy to get, many of them can be shoveled out, as the water is very shallow under the 'bars.'

"Another inducement would be the opportunity to find pearls. Some of great value have been found on these shoals.

"Not only have we the Mussel Shoals on the east, but Colbert Shoals on the west, where a large quantity of these shells are to be found. We have fine freight rates, as well as the great Tennessee river, where they can be barged to the markets of the world, but a better plan would be to manufacture them here. Labor is cheap, and everything advantageously located for the manufacture of the buttons."

#### In the Virgilina Belt.

Mr. William H. Taylor of Norfolk, Va., division freight agent of the Southern Railway, informs the Manufacturers' Record that Mr. J. H. Morong, formerly of Butte, Mont., who has been operating for some time in the Virgilina copper belt, has organized the Motherlode Mining Co. under the laws of New York State, with a capital stock of \$1,500,000. The officers of the company, of which several New York capitalists are incorporators, are Messrs. J. H. Morong of Virgilina, Va., president; W. D. Elger of New York city, vice-president, and George Morong of Virgilina, secretary and treasurer. The company owns about 220 acres of mineral land about three miles north of Virgilina, on which two shafts are being sunk. The vein is twenty feet in width, and shows a good quality of chalcopryite all the way across. The company will use the Morong concentrator, of which Mr. J. H. Morong is the patentee. Mr. Taylor adds:

"The Halifax Copper Co. has been absorbed by the Halifax Mining & Manufacturing Co., chartered under the laws of West Virginia, with a capital stock of \$500,000. The officers of the company are: President, Thomas A. Knauss, Columbus, Ohio; vice-president, Dr. H. A. Rodebaugh, Marysville, Ohio, and secretary and treasurer, O. E. D. Barron, Norfolk, Va. A number of prominent business men in Marysville and Columbus, Ohio, are interested. The company owns the Wall & Elliott mineral tracts, situate about five miles north of Virgilina. On the Wall property a shaft has been sunk 150 feet deep, and levels have been run north and south. The vein is seven feet in width, and shows a high

grade bornite copper ore. The company will erect a mill and concentrating plant, and other extensive improvements are contemplated.

"A number of the prominent citizens of Mecklenburg county have subscribed to a fund of \$5000 to defray the expenses of an expert examination of the mineral deposits of that county. About one-half of this sum will be subscribed by Col. Thomas F. Goode, the wealthiest citizen in Mecklenburg. The eastern tier of the Virgilina mineral belt, where the recent rich gold strike was made, extends into Mecklenburg county. A number of gold discoveries have been made in that county during the past sixty years. There are several gold mines in the county, which were operated with slave labor before the war."

#### Distilling Turpentine.

Mr. Thomas Dixon, Jr., president of the Standard Turpentine Co., of New York, in a letter to the Manufacturers' Record regarding the plans of his company writes:

"Our company has already built an experimental plant at McBee, S. C., which is a great success, producing the finest runs yet produced, as far as I know, of a full standard grade of water-white turpentine by the wood-distilling process. From one cord of wood we got 25½ gallons of water-white pure turpentine, 50 gallons of creosote and oil and one barrel of tar. We are now prepared to build these plants with out process through the South. We have begun with a capital of \$25,000, and will increase it as the business demands."

Officers associated with Mr. Dixon are B. W. Kilgore, Raleigh, N. C., vice-president, and Leo D. Heartt of Raleigh, secretary and treasurer. Mr. W. H. Krug of New York is director of the laboratory.

#### Want Office Supplies.

In a letter to the Manufacturers' Record the International Printers' Supply Co., 2d Independencia No. 8, City of Mexico, D. F., writes:

"This city is pretty well filled with commission houses, and these houses will handle any order they can make money on. Electrical and mining machinery have the biggest sales in machinery. The General Electric Co. has a branch here, and the Mexico Mine & Smelter Supply Co. of Denver has an excellent establishment.

"We are thinking of putting in a general stock of office supplies, pencils, pens, inks, etc. These goods we would buy in good quantities, and we should be given the best wholesale export prices and terms. We are writing the Dixon Pencil Co., mentioning your publication. We occasionally want stationary engines, but printing machinery, new and second-hand, is what interests us. Your paper carries good houses."

#### Wants Native Hardwoods.

The attention of Southern lumber manufacturers is directed to an opportunity for arranging to dispose of the entire output of several mills. Particulars can be obtained by addressing the American Mahogany Co., West and Eagle streets, Brooklyn, N. Y., which informs the Manufacturers' Record that it is ready to negotiate for large quantities of native hardwoods.

#### Looking for Card Index Supplies.

The Yerex & Jones Company of Wellington, New Zealand, writes to the Manufacturers' Record that it would like to get into communication with manufacturers of cardboard for card index supplies, and also with manufacturers of machinery for cutting and perforating the same.

## RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

### Important Work Under Way.

Messrs. C. D. Smith & Co., general contractors, Memphis, Tenn., write the Manufacturers' Record as follows:

"We now have on hand five different jobs. We are just starting the construction of a large terminal yard at Corbin, Ky., for the Louisville & Nashville road. This yard consists of about twenty-five tracks parallel about one mile long, and will be completed this year. We now have this work all covered.

"We also have thirty miles of double-track work under construction on the Illinois Central main line between Memphis and Fulton, Ky., at Dyersburg, Tenn. This work will be completed this fall. This is for the Illinois Central Railroad.

"We are just starting a contract for twelve miles of new work for the Yazoo & Mississippi Valley road, owned by the Illinois Central, between Yarbrough and Swan Lake, Miss. We have this work entirely covered, and it will be completed this year. This is a cut-off, shortening the main line about five miles. This is also for the Illinois Central Railroad Co.

"We have under construction at present 100 miles for the Mobile, Jackson & Kansas City road, beginning at Beaumont, Miss., and running through to Newton, Miss., and a branch running to Ellisville, Miss. This work will be completed this year, and is now about 75 per cent. completed. This line is running north from Mobile, Ala., splitting the State of Mississippi through the center, about halfway between the Mobile & Ohio and the Illinois Central Railroad. We are now laying steel on the first forty miles, which is practically completed to Laurel, Miss.

"We have just closed a contract for 150 miles more of this work for the Gulf & Chicago division of the Mobile, Jackson & Kansas City Railroad, running from Newton, Miss., to Pontotoc, Miss., where it connects with the narrow-gauge road running from Pontotoc to Middleton, which the Gulf & Chicago now owns. This work will be commenced at once, and will be completed by October 1, 1904. We are now letting this work, and have just received all the profiles and data pertaining to it in our office at this point.

"Mr. W. D. Stratton of New York is president of this road, with headquarters at Mobile. W. W. Hayden is chief engineer of construction, with headquarters at Mobile, Ala."

### THE WASHINGTON TUNNEL.

It Will Lie Between the Capitol and the Congressional Library.

The permit for building the Capitol Hill tunnel at Washington, as provided by the terminal plans, has been drawn up. According to this the tunnel line will leave the Pennsylvania Railroad Co.'s present road on Virginia avenue at a point at or near the crossing of 2d street S. W., and run northeast diagonally across the blocks and enter the tunnel at the corner of New Jersey avenue and D street S. E. The tunnel will then curve for a distance of about two blocks and a half to the intersection of 1st and B streets S. E., and thence directly north under the west side of 1st street, east, as far as E street, north, about six blocks, and thence to a connection with the union passenger terminal, to be erected at Delaware and Massachusetts avenue N. E., very near the north end of the tunnel.

This plan for the tunnel requires that it shall lie between the Congressional

Library and the Capitol, being, of course, much nearer the former, which is situated to the east of 1st street E. The plans for a tunnel many years ago provided for a line to the west of the Capitol, but the new line will, it is stated, be so situated as to avoid the possibility of danger to any important buildings.

### CUT-OFF NEARLY DONE.

Patterson's Creek and Pinto Line of the Baltimore & Ohio.

The Patterson's Creek cut-off of the Baltimore & Ohio Railroad will, it is now stated by the company, be completed within two months. This cut-off, which runs from Patterson's Creek, east of Cumberland, to Potomac Station or Pinto Postoffice, west of Cumberland, will save about twelve miles of running, and will cut Cumberland out of the freight run, so that Keyser, W. Va., will be made the division terminal.

The Baltimore & Ohio Railroad makes a loop northward to run from Patterson's Creek to Pinto, with Cumberland at the most northern point on the loop. The cut-off makes a direct line west through the mountains, the most important piece of work on it being the Pinto tunnel. This new arrangement of handling freight will relieve the congestion in the railroad yards at Cumberland.

The Cumberland & Pennsylvania Railroad, which hauls most of the coal output from the George's Creek region, will, in consequence of the building of this cut-off, haul its coal to Piedmont to deliver it to the Baltimore & Ohio, instead of to Cumberland. Extensive yards are being established at Carlos Junction, six miles from Piedmont, for concentrating coal shipments.

### PAN-AMERICAN RAILROAD.

A Company Incorporated to Build a Great North and South Line.

The incorporation of the Pan-American Railroad Co., with \$250,000,000 authorized capital, is reported from Guthrie, O. T., the directors named being William H. Dodge, Stephen A. Sheldon, W. E. Pendleton, Elbridge G. Phelps of Shawnee, O. T., and Charles E. Wells of Lincoln, Neb. It is stated that the same interests chartered the Canadian Southern Railroad and the Guthrie, Shawnee & Gulf.

The plan as announced is for the company to build from Port Nelson on Hudson bay in British America to Winnipeg, Manitoba; thence through the Dakotas, Nebraska, Kansas, Oklahoma and the Indian Territory to Galveston, Texas; thence through Mexico to Central America along the Isthmus of Panama to Columbia, Ecuador, Peru and the Argentine Republic to Buenos Ayres; also from a connection in Peru or Ecuador to Rio Janeiro, Brazil, and from a connection in Peru to Valparaiso, Chili.

It is further reported that a charter was also issued to the American Townsite Co., with an authorized capital of \$10,000,000, this company to be associated with the railway.

Several construction companies, it is stated, will be formed, including the Canadian-American Construction Co., the latter including, according to report, as directors Charles F. Beach, Jr., of London, England; M. L. Muhleman and Charles M. Rawlins, New York, and Chas. B. Williams, City of Mexico.

### Memphis & Gulf.

A circular letter describing the proposed Memphis & Gulf Railroad, in which Chester H. Pond of Morehead, Miss., and others are interested, says that it is to connect with the Illinois Central Railroad at Grenada, Miss., 100 miles south of Memphis, Tenn., and will run thence directly south

east to Pensacola, Fla., 310 miles. Much of the line has been surveyed and located and rights of way secured, while preliminary lines have been run over the rest of the route.

It is further stated that the Memphis & Gulf, in connection with the Illinois Central, will make very nearly an air-line route from Pensacola to Memphis, St. Louis, Louisville, Chicago and the grain country of the Northwest. It will pass through large sections of country now without transportation facilities.

Concerning the character of territory to be penetrated it is stated that mineral lands and valuable clay deposits are found along the line and will be quickly developed when transportation is furnished. There are also large forests of oak and pine timber to be brought into the market, but underlying most of these lands is a strong subsoil which will make them available for agricultural purposes when the timber has been removed.

### L. & N.'s New Shops.

The Louisville & Nashville Railroad Co.'s new shops at South Louisville, Ky., will cover about twenty-five acres of ground. There will be sixteen buildings, according to the plans finally adopted, and they will be arranged in a triangle. The cost of the plant will be about \$2,000,000, and to give the foundations of the buildings greater strength they are laid on piles driven twenty feet into the ground.

Among the larger buildings are the following: The coach shop, 482x180 feet; the iron foundry, 443x90 feet; the freight-car repair shop, 400x145 feet; the freight-car shop, 300x140 feet; the freight-car house, 300x134 feet. The smallest building will be the upholstering shop, 50x60 feet.

Other buildings include the wheel shop and storehouse for freight-car material, the iron storehouse, the smith shop, the oil storage warehouse, the erecting shop, the boiler shop, the planing mill, the passenger truck shop, the general storehouse and the lumber kilns. There will also be a large lumber-yard. The new shops will employ about 2500 men.

### Rice Belt Railway.

The Rice Belt Railway Co. has been incorporated to build a line from Sinton, Texas, to Galveston, Texas, 200 miles. It will connect at Sinton with the St. Louis, Brownsville & Mexican Railway, recently incorporated with Col. Uriah Lott as president, and in which Frisco officials are interested. The incorporators of the new line are Jesse French, Matthew P. Murray and August Schlafly of St. Louis, W. G. Peterson, Willett Wilson, Ross L. Clark and L. Seabrook of Port Lavaca, A. E. Masterson of Angleton, Texas.

It is further stated that the contract for the line has been let to Johnston Bros. of St. Elmo, Ill., who also have the contract for the St. Louis, Brownsville & Mexican Railway. This indicates the carrying out of the plan announced some time ago that Colonel Lott and those associated with him would build an extension to Galveston.

### Grafton Electric Railway.

Mr. Benjamin F. Bailey, one of the directors of the line, writes the Manufacturers' Record from Grafton, W. Va., that the Grafton Street Railway Co. has Joseph P. Hertsman of Cincinnati, Ohio, as engineer in charge of the construction of its street railway.

"The preliminary survey has been made," continues Mr. Bailey, "and he is now preparing plans and specifications for the purpose of submitting them for bids on the construction. No contracts

have been awarded thus far. The company has arranged for the purchase of the Grafton Gas & Electric Light Co., and will operate that plant in conjunction with its street railway.

"There will be about seven miles of line constructed this summer and fall, and said railway company has about closed the negotiations for the purchase and operation of the Grafton Park, located about two miles south from the city, where they expect to put up all manner of devices for amusement of the public."

### To Grow Railroad Ties.

The Pennsylvania Railroad Co. has, it is stated, decided to raise locust trees for use as railroad ties. It is estimated that twenty years will be required for them to grow sufficiently for use. Prof. J. T. Rothrock, commissioner of forestry of the State of Pennsylvania, will select land and superintend the planting.

The Illinois Central Railroad and the St. Louis & San Francisco Railroad have, it is further stated, secured the establishment of branch experimental stations of the forestry bureau of the Department of Agriculture at Sturgis and Kosciusko, Miss.; Black Rock and Portia, Ark.; Clinton, Ky., and Obion, Tenn. Pine, red oak, beech and red gum trees are to be experimented with, with a view to their availability for railroad ties.

The Illinois Central also has at Grenada, Miss., in course of construction a plant for treating timbers with chemicals to increase their durability.

### Branches in Mexico.

Concerning the report that the Kansas City, Mexico & Orient Railway would build 200 miles of branches in Mexico, Mr. Milnor P. Paret, its chief engineer, writes from Kansas City to the Manufacturers' Record:

"I know of but one branch road in Mexico which our company has under consideration; that is for one to extend possibly for fifty or sixty miles westwardly from Minaca or that vicinity and towards the Jesus Maria mines, or what is called the Ocampo district. We have a concession from the Mexican government for this branch. Up to date we have simply made a reconnaissance, and will make no survey whatever for some time. It is quite improbable that construction on this branch will be undertaken before we have our main line completed."

### Fine Interurban Cars.

Ten handsome cars have been received at Louisville, Ky., for use on the Louisville Interurban Railway. They were built at St. Louis. Each is forty-seven feet long, and is propelled by four 50-horse-power motors to enable it to make a speed of thirty-five miles an hour. It has eleven double seats on each side of a central aisle, and there are also four other seats in the car. Over each seat is a parcel rack. The cars are painted a handsome maroon shade, with trimmings in white. The Jeffersontown road is almost ready for use. It is thirteen miles long, but on the Valley Station line, fourteen miles long, only about eight miles have been graded.

### Huntington to Columbus.

A line of electric railway is to connect Huntington, W. Va., with Columbus, Ohio. The Westinghouse companies of Pittsburgh inform the Manufacturers' Record that within a year this chain of roads will be complete. It will consist of the Scioto Valley Traction Co.'s line, running from Columbus to a point 20 miles north of Portsmouth, Ohio; the Portsmouth Street Railway Co.'s road, connecting with the Scioto Valley line and running thence to Portsmouth, continuing



along the river to Hanging Rock, where the Camden Interstate Railway will run from Hanging Rock through Ironton, Ashland and Kenova to Huntington.

#### B. & O. Electric Engines.

The Baltimore & Ohio Railroad Co. has received the first of two 150-ton electric locomotives which are to be used on the Baltimore Belt Line. These locomotives, which were described in the Manufacturers' Record last week, will, together with the three 96-ton electric locomotives, which have been in use for several years, enable the company to handle all its trains over the grade between Camden Station and the summit of the line, a distance of about three and one-half miles, without any assistance from the steam locomotives.

#### A Missouri Electric Road.

The Maryville & St. Joseph Electric Railway Co. has been chartered at Maryville, Mo. It proposes to build a line seventy miles long from Parnell, in Nodaway county, to St. Joseph, running through Nodaway, Andrew and Buchanan counties. The incorporators are Richard Kuchs, Richard M. Bradbury, Stephen H. Kemp, Clarence E. Bartlette, Adolph Lippman, Charles E. Gonnell and John W. Thompson.

#### A Rumor Denied.

Mr. J. M. Barr, vice-president and general manager of the Seaboard Air Line Railway, in a letter to the Manufacturers' Record, says that there is no truth in the press dispatches that the Seaboard Air Line has acquired extensive options on additional water-front property at Portsmouth.

#### A Short Line Connection.

The Southern Railway will, it is reported, build an extension from Oliver Springs, Tenn., to Pilot Mountain, about twenty-five miles. A survey is now being made. The new line will, it is stated, make the line from Knoxville to Cincinnati twenty-five miles shorter, and will develop coal and iron lands.

#### Railroad Notes.

The Missouri, Kansas & Oklahoma Railroad has begun construction of a passenger station costing about \$35,000 at Oklahoma City.

The new river road electric line from Louisville, Ky., to Prospect, will, it is stated, use electric locomotives for handling its freight business.

It is reported that an agreement has been reached between George J. Gould and David H. Moffat for an interchange of traffic between their lines in Colorado.

A dispatch from Oklahoma City, Okla., reports the announcement by the Choctaw, Oklahoma & Gulf Railroad (Rock Island system) that a steel viaduct will be built there.

A dispatch from Norfolk, Va., reports that the new shops of the Seaboard Air Line, erected to replace those burned last May, will be completed within a few days. The buildings are larger than those destroyed.

A street railway and electric-light and power plant are proposed for Brownsville, Texas, franchises for them having, it is reported, been obtained by Mr. John Wharton Maxcy, civil engineer, of Houston, Texas.

The Missouri, Kansas & Texas Railway has built a steel bridge across Sand creek near Bartlesville, I. T., on its Missouri, Kansas & Oklahoma line, and will build another steel bridge across the Arkansas river.

The Southern Pacific system has enlarged its passenger depot at Victoria,

Texas, and has recently built a new freight depot, an oil tank of 30,000 barrels' capacity and additional sidetracks at the same place.

Mr. John A. Knox, chief engineer Arkansas Southern Railroad, writes the Manufacturers' Record from Ruston, La., that he is having a location survey made southwardly from Winnfield, La., with C. H. Sargent as locating engineer.

The promotion of John F. Stevens, chief engineer of the Rock Island system, to the position of its fourth vice-president is reported from Chicago, and also the appointment of W. L. Darling, chief engineer of the Northern Pacific Railroad, to be chief engineer of the Rock Island.

Grading is reported complete and the foundations laid for the Central of Georgia Railway's new freight depot, between Alabama and Hunter streets, in Atlanta, Ga. The office building will be of brick and three stories high, and the entire structure will be about 300 feet long.

The Baltimore & Ohio Railroad Co. has ordered 50,000 tons of 85-pound steel rails for delivery next year. Of this amount, the Maryland Steel Co. at Sparrow's Point, Md., will furnish 10,000 tons; the Cambria Steel Co. will furnish 12,000 tons from Cambria, Pa., and the Carnegie Company of Pittsburgh will furnish 28,000 tons. At \$28 per ton, this order would amount to \$1,400,000.

The Ocilla & Valdosta Railroad Co., which proposes to build a line from Ocilla, Ga., to Valdosta, Ga., about eighty miles, has been organized at Ocilla by J. A. J. Henderson, J. H. Powell, J. W. Paulk, Reason Henderson, J. L. Paulk, M. Henderson, M. J. Paulk, William Henderson, J. C. Luke, R. V. Paulk, D. H. Paulk and J. J. Walker.

Plans are reported complete for the freight depot of the Knoxville, LaFollette & Jellico Railroad (Louisville & Nashville system) at Knoxville, Tenn. The main building will be 160 feet long by 60 feet wide. At one end will be erected a two-and-one-half-story office building. The structure will be of pressed brick, with marble trimmings. R. Montfort, chief engineer of the Louisville & Nashville, has invited bids.

The Hannibal & St. Joseph Railway (Burlington system) will build new yards at Kansas City, with 3500 cars' capacity. Henry Miller, general superintendent, is arranging for construction to begin. The Missouri Pacific Railway is also building a car yard, with a capacity of 3000, while the Frisco has nearly completed a large yard at Rosedale, and the Rock Island and Milwaukee lines are also building extensive lines in Armourdale.

C. A. Morse, acting chief engineer, Santa Fe system, writes from Topeka, Kan., to the Manufacturers' Record, saying: "There is nothing in the report of any immediate building from Owasso to Honey Grove, Texas. We are building a five-mile connection between Havana and Caney, which connects our line from Caney to Owasso without other lines at Havana. We have heretofore been using a part of the Missouri Pacific line to get onto our Caney-Owasso line."

The Book of the Royal Blue for August presents as its opening article a very timely contribution on the international yacht races. Still another seasonable subject is the "Making of a Pope." Several excellent illustrations from the St. Louis World's Fair buildings appear, and also the second descriptive article concerning the same. The magazine furthermore contains several other entertaining contributions in prose and verse. It is published by the Baltimore & Ohio Railroad Co.

## TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

#### Neal Company Organizes.

In its issue of July 2 the Manufacturers' Record outlined the plans of the Neal Manufacturing & Power Co. of Neal, Ga., which was then applying for incorporation. Charter has been granted and the company organized, with the following officers: H. V. Neal of McDonough, Ga., president; E. T. Whatley of Newnan, Ga., vice-president; A. J. Kelley of Boston, Mass., general manager. These three officers and Messrs. G. E. Strickland of Concord, Ga., J. F. Madden, also of Concord, and Adolph Suck of Boston, Mass., compose the board of directors. As previously stated, the company proposes building a cotton mill to have 30,000 spindles and 1050 looms—be operated by electricity generated by water power. Riparian rights on the Flint river have been secured, and it is believed that 4000 horse-power can be developed. Mr. Suck, mentioned as one of the directors, is mill engineer and architect, and will prepare the plans and specifications.

#### Cotton Goods for Cuba.

Capt. W. F. Smith, who has been connected with the Cuban customs service, is making an effort to interest Southern cotton mills in manufacturing goods for the Cuban market. He said at New Orleans that that market is a splendid one, but the product must be of a certain texture and finish, and that though the goods consumed in Cuba and the Latin-American republics now come from Manchester, England, and Barcelona, Spain, there is no reason why the Southern mills should not control the trade. During the past fiscal year the United States exported to Cuba but 4,044,616 yards of cotton cloths in a total of 495,379,197 yards.

#### \$250,000 Mill for Greensboro.

Another large cotton mill will be added to the textile manufacturing interests of Greensboro, N. C. It will be capitalized at \$250,000, which amount will be increased to \$500,000 soon after the initial plant has been completed. The product will be special cotton textile fabrics, the details of which are not yet ready for announcement. W. I. Young and associates will build the new mill, and Mr. Young will be at the head of the corporation to be formed. His offices are at 1020 Empire Building, Atlanta, Ga. No information further than the above can be announced at present.

#### Doubling Its Mill.

The Capital City Mills at Columbia, S. C., has decided upon extensive enlargements of its plant and begun the erection of an additional building. This structure will be 86x100 feet, and will be equipped with 8648 spindles, 70 looms and complementary apparatus for manufacturing fine white lawn. The company has been operating a night force, and makes the improvement largely to enable it to cease night work. The Capital City plant now has 6352 spindles and 220 looms.

#### Contract for Lane Mills.

The Lane Mills of New Orleans, La., has awarded contract to D. J. Glover for

the erection of an additional building to cost \$75,000. This structure is undertaken in connection with this company's plans, announced at length in the Manufacturers' Record of July 2, for installing 25,000 spindles and 750 looms to manufacture blue denims and other colored goods. This addition will be two stories high, 180x300 feet. About \$500,000 will be the total expenditure for all the improvements.

#### Textile Notes.

Efforts are being made to establish a \$5000 cotton-twine factory at Rome, Ga. The local business men are interested.

Evansville (W. Va.) Woollen Mills has completed general improvements and installed additional machinery for increasing capacity.

Madisonville (Tenn.) Knitting Mills has decided to increase its capacity, and has ordered twenty-five additional knitting machines and complementary apparatus.

Cedartown (Ga.) Knitting Co. has ordered additional machinery for its Josephine Mills and the Wahneta Mills, and will increase output to a considerable extent.

The Salem (Va.) Woollen Mills was destroyed by fire last week, the loss being reported as estimated at \$150,000. It has not been stated as yet whether the company will or will not rebuild.

J. E. Smith Manufacturing Co., Thomson, Ga., was mentioned last week as contemplating the enlargement of its 3120-spindle yarn mill. Definite action will be taken by the stockholders at their annual meeting on September 2.

Manufacturers are seeking site in the South for a large silk mill, and efforts are being made to induce them to locate at Savannah, Ga. J. W. White, industrial agent of the Seaboard Air Line Railway, is said to be corresponding with the promoters.

Athens (Tenn.) Woollen Mills has decided to increase its capacity and has ordered additional machinery. The new equipment includes thirty-five looms, which are now arriving at the plant and being installed. This company is capitalized at \$75,000.

Pelham (Ga.) Manufacturing Co., noted last week as contemplating the addition of seventy-two looms, does not expect to buy this machinery before next January. The company's new dyehouse has just been completed and all the machinery has been installed, costing about \$10,000.

It is reported that George W. Kavanaugh and associates of the F. W. Kavanaugh Manufacturing Co., Cohoes, N. Y., will establish a knitting mill at Columbus, Miss. The plant is said to be the organization of a company with capital stock of \$150,000, one-half of which is to be furnished by local investors.

Woodside Cotton Mills of Greenville, S. C., has completed its buildings, and is now installing the textile machinery. It was originally announced that 10,000 spindles and 300 looms was to be the equipment, but having completed the buildings, there have been 11,280 spindles and 300 looms put in position. The company was reported several months ago as planning to make this a 30,000-spindle and 300-loom mill, and some definite announcements regarding this may be made later on.

The market for cottonseed oil in New York on Tuesday last closed dull, and throughout the whole week was devoid of any special feature. Sales on Tuesday showed 41 cents for August prime yellow; prime winter yellow was quoted at 45 cents.

## PHOSPHATES.

### Phosphate Markets.

Office Manufacturers' Record.

Baltimore, Md., August 26.

The movement in phosphate rock in a local way has been very light during the past week, as in all other fertilizer ingredients. Manufacturers of fertilizers have a good supply, and there is very little demand from out-of-town buyers. Receipts of phosphate rock continue liberal. Few charters were reported last week, but reports are current of several vessels to be taken for early September. The only charter reported was the British steamer Roxby, 1964 tons, from Port Inglis to Stettin with phosphate at 16 $\frac{1}{2}$  September 20. The British steamer Heathdene, 2277 tons, was taken to load on west coast of South America for the United States with nitrate at 20 $\frac{1}{2}$  August. There is a liberal shipping movement in phosphate rock at all the ports, and from Port Tampa several large cargoes, aggregating over 9000 tons, cleared last week. The market for Florida rock continues firm, with few sales reported, prominent companies having all they can do to fill old orders. The movement in the Tennessee phosphate field is quite active. New deposits are being opened up in Maury, Hickman and Sumner counties, and at Mt. Pleasant the various companies are getting out considerable rock. The market for both domestic and foreign rock is very steady. In South Carolina there is a better demand for rock, especially from Europe. Prices for both crude and air-dried rock are nominally steady.

### Fertilizer Ingredients.

The local market for ammoniates shows no special feature, and the tone is quiet, with values easy, but not notably lower. Stocks in the West are ample for present wants, and are generally held firm by packers. The demand from Southern sources has not yet commenced.

The following table represents the prices current at this date:

Sulph. of ammonia (gas), spot.	\$3 10	@	3 12 $\frac{1}{2}$
Nitrate of soda, spot Balto.	2 12 $\frac{1}{2}$	@	2 15
Blood.....	2 70	@	2 72 $\frac{1}{2}$
Azotine (beef).....	2 55	@	2 57 $\frac{1}{2}$
Azotine (pork).....	2 55	@	2 57 $\frac{1}{2}$
Tankage (concentrated).....	2 45	@	2 47 $\frac{1}{2}$
Tankage (2 and 20).....	2 57 $\frac{1}{2}$	@	10@2 60 & 10
Tankage (7 and 30).....	22 00	@	22 50
Fish (dry).....	22 50	@	23 00

### Phosphate and Fertilizer Notes.

It was reported last week in Mt. Pleasant, Tenn., that Mr. John H. Carpenter and associates of Columbia have recently purchased the holdings of the Leatherwood Phosphate Co. in Hickman county, Tennessee.

The E. O. Painter Fertilizer Co. of Jacksonville, Fla., has leased the water lot adjoining its factory, and will at once commence the erection of a large lumber dock, which it has leased to a lumber company at a good figure.

The Thomas Drug Co. of Henderson, N. C., has been incorporated, with a capital of \$6000 and privilege of increasing to \$50,000. The incorporators are John T. Thomas, P. H. Thomas, W. A. Hunt, A. H. Houff, S. S. Parham, J. H. Brodie, C. A. Lewis and others.

It is stated that the Grassilli Chemical Co. of Cleveland, Ohio, will establish a branch plant at Clarksburg, W. Va. It is reported that fifty acres have been purchased for a site and that construction work will be begun at once on the first of a plant of twelve units.

It is stated that the phosphate mines at Mountain Junction, near Chattanooga, Tenn., which have been owned and operated for several years by J. E. Edington, have been sold to H. W. Gonia of Dayton, Tenn. Mr. Gonia represents a com-

pany in which he is a stockholder, and will personally superintend operations at the mines. Improvements will be made and new machinery added at a cost of \$10,000.

Shipments of phosphate rock from Port Tampa continue liberal in volume, and the total exports of rock for the month will be far above the average. Last week 9700 tons were shipped, valued at \$58,200, the largest cargo shipped was 4400 tons by the British steamer Skerryvore for Belfast, Ireland, furnished by the Palmetto Phosphate Co.; the Italian steamer Li-vetta cleared for Bordeaux, France, with 2600 tons of rock from Joseph Hull & Co., and the American steamer Evelyn with 2700 tons for New York, cargo from Jos. Hull & Co.

The Century Phosphate Co. of Louisville, Ky., has been incorporated, with a capital stock of \$50,000 and authorized capital of \$100,000. The incorporators are A. T. Dukes, Frank B. Polley, L. W. Batts, L. M. Render and J. T. Welch. The company will mine and handle phosphates and other fertilizers and phosphate products. Those interested in this new concern decline to give any statement as to the future operations of the company. It is said, however, that probably the company will build a large plant in Louisville, and will go into the phosphate and fertilizer business on a large scale.

### Cottonseed-Oil Notes.

The cottonseed-oil mill at Union, S. C., is now undergoing repairs, and will be put in perfect shape for the fall crushing season. New machinery is being installed under the supervision of Mr. C. B. Marcum.

It is stated that definite steps will be taken within the next week or ten days regarding the movement for the establishment of a cottonseed product exchange as a feature of the Chamber of Commerce of Atlanta, Ga.

The Southern Oil & Fertilizer Co. of Meridian, Miss., previously reported as chartered with a capital stock of \$75,000, has built a plant for manufacturing cottonseed oil and fertilizer. Mr. A. H. George is president of the company.

The work of grading the site for the new cotton-oil mill at Marshall, Texas, was commenced last week, and will be pushed with all possible force until finished. The company expects to have the plant ready for operations in the fall.

Cottonseed and cottonseed products at Memphis, Tenn., on the 22d were quoted as follows: Prime crude oil, nominal; off crude, 24 to 30 cents; prime summer yellow, 37 cents, and choice summer yellow, 45 cents; cottonseed by river \$12 and by rail \$13; prime cottonseed meal, \$20 to \$26.50 per ton, and prime cottonseed cake, \$20 per ton; linters, 3 to 4 cents per pound. Receipts of seed since September 1, 1902, amount to 44,450 cars and 617,161 sacks, against 3382 cars and 591,574 sacks.

The following are official quotations on cottonseed and cottonseed products as posted at the Cotton Exchange in New Orleans on the 22d inst.: Prime refined oil in barrels, 42 $\frac{1}{2}$  cents per gallon; off refined in barrels, 38 $\frac{1}{2}$  cents per gallon; prime crude, loose, nominal per gallon; prime cottonseed cake, \$25.50 per ton of 2240 pounds; off prime cottonseed cake, nominal; prime cottonseed meal, \$25.50 per ton of 2240 pounds; off prime cottonseed meal, nominal; soap stock, 80 cents; linters, per pound, choice, 4 $\frac{1}{2}$  cents; A, 4 cents; B, 3 $\frac{1}{4}$  cents; C, 3 $\frac{1}{4}$  cents; cottonseed in sacks delivered at New Orleans, per ton of 2000 pounds, \$11; in bulk delivered at New Orleans, per ton of 2000 pounds, \$10.

## LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

### LUMBER MARKET REVIEWS.

#### Baltimore.

Office Manufacturers' Record.

Baltimore, Md., August 26.

The transactions during the week under review in the local lumber market have shown a less active demand, and the tone is generally quiet in nearly all avenues of the trade. Receipts of North Carolina pine during the week have been quite liberal, and with a moderate demand, there is more or less accumulation, with values for certain grades slightly easier. Air-dried lumber is lower for box grades, and in kiln-dried stock prices are well maintained. For the better grades of North Carolina pine there is a good inquiry from points beyond the State, and it is the opinion of many in the trade that the fall months will show up in better form. Cypress is steady, with a better inquiry from builders. White pine is quiet as to the demand and prices very steady, with no surplus stock on hand. Poplar, like other woods, shows less action and the demand is somewhat less than last week, while prices have eased off from \$3 to \$5 per thousand, according to grade. In all hardwoods there is about an average movement, the demand being light and prices about steady. The foreign export trade continues quiet, with shipments light, and business at European points shows little improvement. The contract for delivering the ties for the St. Louis, Brownsville & Mexico road was let on the 19th inst. to the Texas-Mexican road by the Kirby Lumber Co. The ties will begin arriving at Corpus Christi by September 2 on barges from Orange, and the dock of the Texas-Mexican railroad will be put in condition to receive them at once.

#### Norfolk.

[From our own Correspondent.]

Norfolk, Va., August 24.

At this period of the season there is usually a lull in the lumber trade and more or less inactivity in certain avenues of the industry, but the present season has shown unusual features, both in the supply and demand. The general tone of trade has been very steady, without any urgent inquiry, while buyers are supplying their immediate as well as their future wants. The output in North Carolina pine shows a liberal volume, and is quickly absorbed at present prices, and both in domestic and foreign channels there is a very satisfactory business in progress. At all milling sections in Virginia and Eastern Carolina there is an unusual activity among the various saw-mills, nearly all of which are well supplied with orders. In the local market dressed lumber is in good shape and prices firm, while planing mills are all having as much as they can do to fill orders. In all woodworking concerns in this section there is quite an active movement, and in box and crate factories business is better than usual. The local demand for lumber is becoming quite a feature in the market, as builders and contractors are at present fully employed on contracts for buildings of various kinds in the city and suburban points. The hardwood market is about steady, with a moderate demand for lumber. Oak of all grades and dimensions is firm, with a good inquiry from furniture manufacturers and others. Wagon shops are purchasing ash freely, this wood being in rather light supply, with prices very steady. In other hard-

woods the tone continues to indicate a continuance of an average demand. Among the new lumber companies reported is the McKenney Manufacturing Co. of McKenney, Va., which has been incorporated with a capital stock of \$3000 to \$25,000 for manufacturing lumber and dealing in real estate. The incorporators are B. E. Cogbill, J. R. Beck, H. M. Woolridge and E. G. Cobb. The Camp Manufacturing Co. of Franklin, Va., which has been contemplating the removal of its plant from Franklin to Portsmouth, is now about to put its plans in execution. The company will locate on the water front, and part of the Seaboard's extensive wharf property will be utilized for the erection of its finishing plant. All the company's rough lumber will be shipped to Portsmouth for working up into finished products. The saw-mill plant of the Carolina Pine Lumber Co. at Wilson, Va., near Suffolk, was destroyed by fire yesterday. The loss is estimated at \$5000. The owners of the plant are J. L. McLenore and J. Lethergry of Suffolk, and G. S. Briggs of Norfolk.

#### Brunswick.

[From our own Correspondent.]

Brunswick, Ga., August 24.

The outward movement of lumber for the month of August so far indicates a heavy volume, comparing favorably with the record-breaking months of June and July. The shipments by the regular steamship lines amount to 3,827,673 superficial feet. The sail movement has been very strong, and on account of the advance in freight rates from the interior mills to the West, the Western shipments have been curtailed, and this has caused large volume to come to Brunswick for Eastern delivery, and as prices are up, the mill people are not kicking at this turn of affairs. The coastwise freight situation shows a steady rate of \$6.25 on lumber and 19 cents on cross-ties from Brunswick to New York as a South Atlantic basis. The Wiggins Lumber Co. at Fendig, near here, has sold out to Garbutt & Goddard. Report from Darien last week shows a lumber movement of 172,000 superficial feet, all foreign.

#### New Orleans.

[From our own Correspondent.]

New Orleans, La., August 24.

Conditions surrounding the general lumber and timber market in this section are at the moment very favorable, and indications point to a good, substantial fall trade in yellow pine, cypress and hardwoods. In the local market yellow-pine men report mills running steadily, with a good output, and orders on file numerous. Along the lines of railroad terminating in this city reports show unusual activity among Louisiana and Mississippi mills. The demand from Northern and Middle Western points is good, while from Gulf points the reports are very favorable, large shipments being made from Gulfport and other points. At Gulfport the improvement in shipments of lumber during the past year has been remarkable, owing to the improvements in the harbor, dredging of which is being vigorously pursued. A channel seven miles long and 300 feet wide has been dredged from the pier at Gulfport to the Ship Island harbor, and seagoing vessels under 3000 tons burden find no difficulty in running alongside the pier and receiving their cargoes, which consist as yet wholly of lumber. During the year ending December 31, 1902, thirty-one vessels landed at this pier and took away 19,097,237 feet of lumber, valued at \$338,000, which was an excellent showing, considering the fact that the dredging of the channel had not progressed



sufficiently far to permit ships of large tonnage to reach the port. But the dredging work was industriously pushed, and the result is seen in the increase of business done there during the first six months of the present year. The figures show that from January 1 to June 30, 1903, there loaded at the pier no less than forty-eight vessels, taking on 41,269,765 feet of lumber, valued at \$748,000. The demand for yellow pine for Europe shows slight improvement, but while the domestic business is in such a healthy condition manufacturers are not disposed to press business in Europe while the markets are so depressed, especially in the ports of the United Kingdom. The saw-timber market is easy, and while business in Europe continues unsettled the tone will remain weak. The bulk of business is in shipping on old orders. There is a good demand for cypress from Western points, and also an improvement in the Eastern inquiry, as labor troubles are being fairly settled in the latter section. The prospects for a good fall trade in cypress are considered excellent. In hardwoods the situation is satisfactory as far as values and the stability of the market are concerned. Oak and poplar are in good demand, as also gum and cottonwood. Ash is also selling well, with a good inquiry from woodworking concerns. The export trade has been quiet recently, but a good fall trade is expected.

#### Mobile.

[From our own Correspondent.]

Mobile, Ala., August 24.

There is only a moderate demand for sawn timber, and the market is generally quiet, with light receipts, and the output at Moss Point considerably reduced by the closing of several mills. The tone, however, continues to rule firm, with shippers only purchasing for present necessities, and the quotations remain at 17 to 17½ cents per cubic foot. Saw logs are in good demand, with light receipts; cypress logs, 7 to 12 cents per cubic foot; ash, \$8 to \$12.50 per 1000 feet; oak, \$8 to \$12; cottonwood, \$4.50 to \$5, and Tupelo gum, \$5.50 per 1000 feet. Hewn timber is firm, and the season is about closed, and shippers at Pascagoula and Pearl River, Miss., are sinking their stock, and contracts for 1904 are closed at 17 cents, with no sales reported. The lumber trade is good, and mills, both here and at all Gulf ports, are running steadily, with the present cut quickly absorbed by previous orders. The demand continues fair from Cuba and South America, and very little Mexican business doing. The shipments during the past week were as follows: Steamer Pagassari for France with 12,543 cubic feet of hewn timber, 93,134 cubic feet of sawn timber and 969,816 feet of lumber; steamer Larrinaga for Liverpool with 51,213 cubic feet of hewn timber, 93,099 cubic feet of sawn timber and 164,271 feet of lumber; steamer Sandsend for Hamburg with 68,688 cubic feet of sawn timber, and for River Tyne with 139,213 cubic feet, and 15,875 cubic feet of hewn timber for Hamburg; bark Pleione for Buenos Ayres with 704,359 feet of lumber; schooner Josephine for Cardenas with 275,762 feet of lumber, and bark Paulus for Port Natal, S. A., with 767,340 feet. Other shipments of lumber amounted to 360,000 feet. Freight rates are well maintained. There is a good demand for tonnage for River Plate ports. The British steamer W. J. Radcliff, 1239 tons, was taken last week to load timber at a Gulf port for Bristol at 83/9, early September, and British steamer Saba, 1608 tons, from the Gulf to Grangemouth or Antwerp with timber at 82/6, September.

#### Nashville.

[From our own Correspondent.]

Nashville, Tenn., August 24.

As this is one of the most prominent hardwood centers in the country, the usual midsummer dullness is apparently absent, and manufacturers are enjoying more than an average volume of business for this period of the season. The demand for lumber is not quite as pronounced as it was six months ago, but under present conditions a good, substantial trade is almost certain for the balance of the year. Recently large consumers have been purchasing only to supply immediate wants and have been waiting and watching the market, hoping for lower prices. As the fall trade will soon open up, there is every probability that the movement in lumber of all grades is better than last year. Prices under a steady demand during the summer have been firm, and throughout the general list there has been little or no shading of values. The river business is expected to be of considerable volume during the fall and winter months, as there is a larger supply of logs and lumber to come down the Cumberland this year than ever before. Experts in the trade estimate that there is already over 7,000,000 feet of lumber on the banks of the river awaiting shipment. In addition to the lumber, there is, perhaps, 40,000,000 feet of logs, besides millions of staves and large quantities of crossties. Of the various woods in the open market oak is very strong, especially in plain sawn lumber. Quarter-sawn stock is in light supply and prices steady. Ash is in good demand, with values firm. Cottonwood is a shade easier, while stocks show no accumulation, and the demand steady. Receipts of gum are liberal and stocks are moving freely, as this wood is becoming popular for a variety of uses, thus sustaining its value in the open market. The consolidation of the firms of C. C. Northern and the A. E. Baird Lumber Co. is announced. The business will be continued under the name of the Baird Lumber Co. Mr. S. Martin of S. Martin & Bro., prominent in lumber circles in Detroit, Mich., has been in the city recently, and is investigating a tract of timber in Dickson county. It is stated that he may locate saw-mills on this property.

#### Lumber Notes.

The Wiseman & Arkansas Lumber Co. of Little Rock, Ark., has increased its capital stock to \$1,250,000.

Mr. S. L. Chapman has been appointed official inspector of the Georgia Saw-Mill Association for Florida, with headquarters at Jacksonville.

The Laurel Sash and Box Factory, domiciled at Laurel, Miss., has been incorporated, with a capital stock of \$30,000, by Frank Gardner, D. O. Parker and others.

Mr. E. L. Thomas of Valdosta, Ga., has purchased the saw-mill plant of Bladin & Co., near Brunswick. The mill is a large one, and the sale represented an outlay of \$25,000.

The bark Charles Loring, with 381,000 feet of lumber, cleared last week from Charleston, S. C., for New York, and the bark Auburn, with 396,000 feet of lumber, for Washington, D. C.

The Shingle Manufacturing Co. of Myrtle Beach, S. C., has been incorporated, with a capital stock of \$10,000. The incorporators are J. E. Bryan, Frank W. Burroughs and Hal L. Brooks.

The Grandview Lumber Co. of Grandview, Texas, has been incorporated, with a capital stock of \$15,000. The incorporators are J. A. Hill, O. C. Walton of Grandview and A. E. Griffin of Itasca, Texas.

The Kola Lumber Co. of Kola, Covington county, Mississippi, has been chartered, with a capital stock of \$50,000. The incorporators are Milford Parker, James McCormick, T. F. Butler and N. N. Parker.

The new plant of the Williams Lumber Co., located near Fort Cheatham, Tenn., on the Rossville line of the Rapid Transit of Chattanooga, has commenced operations. The force at present employed is light, but will be increased gradually.

The Parkersburg Bending Co. of Parkersburg, Va., has bought the old Hickory plant south of the Kanawha. In the purchase is included several acres of land and several buildings. The bending company will ask for a charter, and will have a capital of \$50,000.

Messrs. A. James & Co. of Pineville, Ga., has purchased 12,000 acres of fine saw-mill timber near Moultrie, Ga., paying \$8 an acre for the saw-mill privilege alone. A saw-mill will be located on the Tifton, Thomasville & Gulf Railroad near the body of timber.

The Stewart-Watson Furniture Co. of Memphis, Tenn., has been incorporated, with a capital stock of \$50,000. The purpose of the company is to do a business in buying and selling furniture. The incorporators are J. A. Stewart, P. S. Stewart, George Watson, A. M. Watson and James Hunt.

It is announced that the Pine Hill Lumber Co. of Pine Hill, Ala., has been purchased by the P. Vrendenburg Lumber Co. of Springfield, Ill. It is understood that fifteen miles of road and other improvements amounting to over \$12,000 will be made immediately by the new owners.

The lumber plant of the Conecuh Lumber Co., located in the outskirts of Montgomery, Ala., was destroyed by fire last week. The loss is estimated at \$65,000, with \$35,000 insurance. The officers of the company state that the plant will be rebuilt on the same site as rapidly as possible.

The Finley Bros. Co. of Chester, W. Va., has been chartered, with a capital stock of \$10,000. The company will deal in lumber and contract and construct buildings. The incorporators are Joseph N. Finley, J. W. Finley, R. A. Finley, Joseph McCoy, Chester, W. Va., and George A. Hasson, East Liverpool, Ohio.

The McKenney Lumber Co. of McKenney, Va., reported as incorporated last week with \$25,000 capital, has an established plant for dressing lumber, about 50,000 feet daily capacity, and for making barrel heading. B. E. Cogbill is president of the company; L. G. Wooldridge, vice-president, and J. R. Beck, secretary and treasurer.

The Chadbourn Manufacturing Co. of Chadbourn, Columbus county, North Carolina, was chartered last week, with a capital of \$25,000. The company will do a general lumber and saw-mill business and manufacture furniture. The incorporators are J. A. Brown, R. E. L. Brown, D. C. Whitted, M. F. Heinhardt, H. E. Newberry, H. M. Swinson and the Magnolia Manufacturing Co.

An important change has been effected in the personnel of the Hammond Lumber Co., Limited, of Hammond, La. J. B. McNulty becomes president, having purchased W. G. Day's interest. C. W. Burton is vice-president, and E. E. Johnson is secretary and manager. The capital stock of the company has been increased from \$10,000 to \$100,000. These changes will make it one of the strongest companies in the State.

At a meeting of the traffic representatives of the Southwestern lines at the

St. Louis freight traffic bureau on the 19th inst. it was decided to put the two-cent increase in the lumber rate for St. Louis and Cairo territory into effect on September 1. The Missouri Pacific and other lines had decided to put the increase in effect on August 15, but other roads in the Southwest had not agreed on the date until last week. The rate is applicable to yellow-pine lumber from the Southwest.

It is stated that J. A. Gray of Bagdad, near Pensacola, Fla., has invented what is known as a double-cut circular saw, and by its operation almost twice the output of a saw-mill can be obtained. The saw cuts a stick of timber both coming and going. A lot of 279 logs were cut one day last week by the process, while the daily capacity of the mill was 180 logs. Prominent millmen are interested in the process, and propose to have their plants equipped with this circular saw.

During the year ending December 31, 1902, thirty-one vessels loaded at Gulfport and carried out 19,007,237 feet of lumber, valued at \$338,000. The dredging work in the harbor has been pushed with vigor, and the result is seen in the increase of business done during the past six months of the present year. The figures show that from January 1 to June 30, 1903, there loaded at the pier no less than forty-eight vessels, taking on 41,269,765 feet of lumber, valued at \$748,000.

The Marquette Timber Co. commenced operations at its plant in Little Rock, Ark., last week. The company will cater to the wholesale trade, and later will be identified with a separate company to transact local business, and will make a specialty of end-matched hardwood flooring under the Wilce patent. The machinery has been ordered, and will be installed by the patentee. Its daily capacity will be 100,000 feet of dressed lumber. S. M. Savage is president of the Marquette Timber Co.

It is stated that Col. R. E. Johnston, representing the Saluda Lumber Co., has purchased 15,351 acres of timber land in Saluda and Cleveland townships, South Carolina, with the exception of 150 acres in Glassey Mountain township. The timber covering the land will be cut and marketed, and the Saluda Valley Railroad Co. proposes to build a railroad from Greenville to the foot of the Blue Ridge mountains, a distance of about twenty-five miles, for the purpose of gaining access to the timber lands.

The following cargoes were shipped from Jacksonville, Fla., for the week ending the 21st inst.: Clearances—Barkentine James H. Hamlin, for New York, with 12,400 ties; steamship Iroquois, for New York, with 500,000 feet of lumber, 700,000 bundles of shingles, 3000 barrels of naval stores; schooner Robert C. McQuillen, for Philadelphia, with 375,000 feet of lumber; schooner John M. Brown, New York, with 370,000 feet of yellow-pine lumber; steamer Westover, for Philadelphia, with 300,000 feet of yellow pine; schooner Gardner B. Reynolds, for New York, with 300,000 feet of yellow pine; steamer Huron, for Boston, with 750,000 feet of lumber, 5000 ties, 4500 bundles shingles; steamship Apache, for New York, with 300,000 feet of lumber, 6000 bales shingles, 1800 barrels naval stores, 200 bales tobacco; schooner Joel Cook, for New York, with \$20,000 feet of lumber; schooner James Salter, for Porto Rico, with 217,207 feet yellow pine; steamer Santurce, for New York, with a cargo of 24,000 crossties; steamer Kiowa, for Boston, with 700,000 feet of lumber, 4500 crossties, 3000 bales of shingles, 900 packages of naval stores.

## MECHANICAL.

## Reed's Standard Pipe Wrench.

Users of modern pipe wrenches will be pleased to view the accompanying illustration. It shows Reed's Standard Pipe Wrench. The tool is made of tough iron, with the jaws and facings of tempered tool steel; both jaws and facings are renewable.

One of the principal features of this wrench is the quickness with which it can be operated. It takes all sizes of pipe within its capacity instantly. The mo-



REED'S STANDARD PIPE WRENCH.

ment the wrench is laid over the pipe it automatically adjusts itself to the size of the pipe and the slightest pressure downward on the handle grips it securely. It never slips. The harder the downward pressure, the tighter it grips, while however tight the grip the slightest upward pressure on the handle instantly releases the grip and the action of the jaws on the pipe is like a perfect ratchet, each grip being firm and secure. For this reason this wrench is a great time-saver.

A trial of the wrench convinces anyone of its utility and convenience. The Reed Manufacturing Co. of Erie, Pa., manufactures this tool.

## S. K. C. Induction Motors.

The latest developments in electrical equipment always make interesting information for present and prospective users of this class of machinery. Two accompanying illustrations show views of the S. K. C. induction motors. The maker,

over the direct-current motor. As the conditions of operation for alternating-current motors cover a very wide range, it has not been deemed expedient to make one style answer for all service, but three distinct types have been developed.

The type A is simplest. Its armature or secondary is of the "squirrel-cage" type, and consists of straight copper bars laid in partly-closed slots, with practically no insulation, and short-circuited by means of heavy end rings. Injury to the armature either by heating or by mechanical displacement of the parts is practically im-

possible, and the wear on the motor is reduced to that which takes place in the bearings.

Owing to the extreme simplicity of armature construction, the type A motor is the most desirable where the conditions admit of its use, namely, where the motor is not required to start heavy loads, or where a large starting current will not injuriously affect the potential regulation of the system. It is possible to start the type A motor by simply closing the line switch, and this method is used with motors below five horse-power. But as the first rush of current, when so starting, amounts to several times the running current, it is advisable to use with the larger sizes of motors a device called a starting compensator to reduce the voltage impressed upon the motor, and thus decrease the current taken.

The starting compensator consists of a single coil transformer in each phase of the circuit, with taps brought out at vari-

ous points of the winding in order that a number of potentials may be obtained. The compensator is provided with a double-throw oil switch, by means of which, after starting, the coils are cut out and the full voltage of the line applied to the motor.

Where motors are located near and operated from a bank of transformers, it is often practicable to obtain the reduced potential necessary for starting by means of taps brought out from the secondary

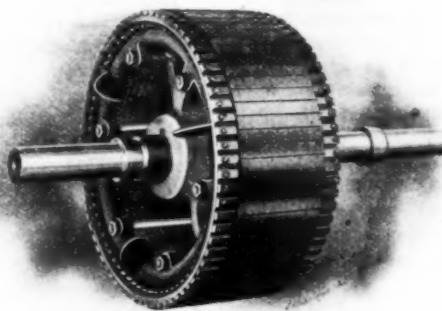
of the transformers, thus obviating the necessity for a special starting compensator.

As has been described, the starting current is kept low in the type A motor by reducing the voltage applied to the primary. In the type B this result is secured by introducing starting resistance within the secondary circuit. The type B motor does not possess the same simplicity of construction as the type A, owing to the fact that the armature has a polar winding, and a device for varying the armature resistance is necessary, but it has this advantage—it will start a given load with

less Electric Manufacturing Co., Pittsfield, Mass.

A new factory is being erected on Avery Island, La., to meet the expansion in the manufacturing of tobacco sauce, which has been a distinctively Louisiana industry, and which has been carried on at Avery Island since 1868. All the peppers used in the industry are grown on the island, about 100 acres of land being employed for that purpose.

Franklin & Herrera of Buenos Ayres, who represent foreign manufacturers,



ARMATURE OF TYPE A MOTOR.

a current materially less than that taken by the type A. The type B motor is so designed that for a given torque the starting current will not exceed the running current. Therefore, this type is recommended where the motor must start heavily loaded, and where a large current, such as the motor with short-circuited armature takes when starting at full load, would be objectionable.

The starting resistance is placed within the armature spider, and leads are brought out from several points of the re-

write to the Manufacturers' Record that during the past ten years there has been an increase of nearly 100 per cent. in the value of merchandise exported from Argentina, but that there has not been much of a variation in the value of imports.

The Virginia Passenger & Power Co., according to a dispatch from Richmond, Va., proposes to dam the Appomattox river above Petersburg for the development of 10,000 horse-power of electrical energy for use in Petersburg and Richmond, and incidentally to build a great pleasure park along the Appomattox, which by the building of the dam will become an immense lake.

The Greater Georgia Association, of which Mr. J. K. Orr of Atlanta is president, proposes to spend within the next three months \$3300 in advertising the advantages of the State for the homeseeker and the manufacturer.

It is announced that the Di Giorgio Importing & Steamship Co., which has operated steamships between Baltimore and Jamaica and Cuba, will operate a line between New Orleans and Central America.

The coal interests of Wheeling are preparing to ship on the next rise in the Ohio, and one company will ship 400,000 tons on 400 barges to New Orleans, there to be loaded for European points.

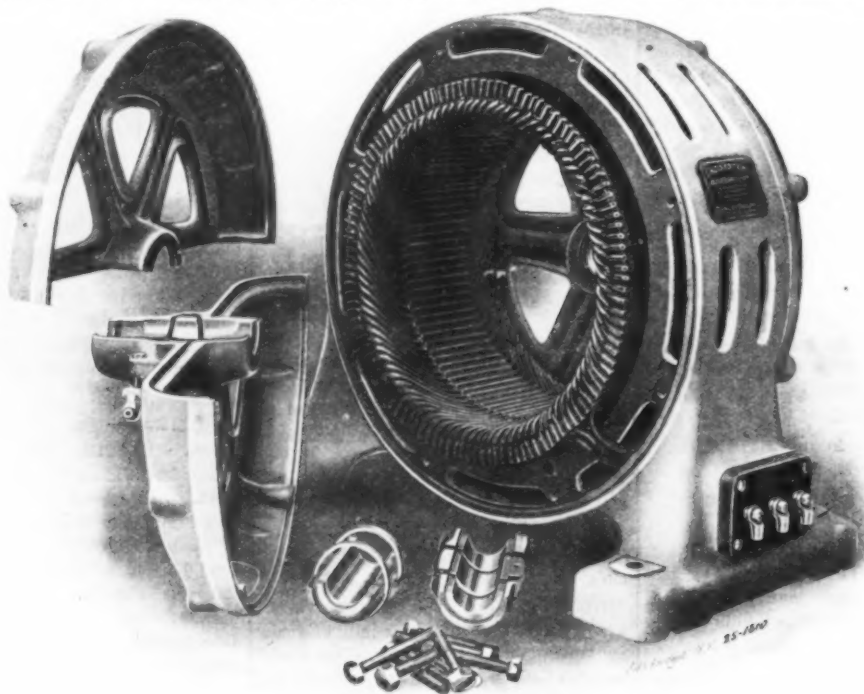
Plans have been perfected by the management of the Eagle and Phoenix Mills, Georgia, for the opening in September of a kindergarten for the benefit of children of operatives in the mills.

Messrs. E. L. Gregory & Co. have commenced mining phosphate rock from their property at Twomey, Hickman county, Tennessee, which they recently purchased from Dr. Grigsby.

A valuable carload of poplar lumber was shipped from Sparta, Tenn., last week. The car contained 19,500 feet of two-inch poplar, and brought \$642.50.

Missouri in 1902 produced 4,063,572 tons of coal, an increase of 250,045 tons over the preceding year.

It is estimated that the strike of street-car men at Richmond, Va., resulted in a loss of \$225,000.



S. K. C. TYPE A INDUCTION MOTOR, WITH ARMATURE OR SECONDARY REMOVED, SHOWING FIELD OR PRIMARY WINDING AND BEARINGS IN THE END FRAMES.

in completing its line of high-grade alternating-current apparatus, is offering these induction motors. The induction motor, by reason of its simplicity of construction and operation and its high efficiency, is becoming more and more popular, not only as an adjunct in great transmission systems where alternating currents are necessarily employed, but also for local distribution of power in factories, mines and other industrial establishments, where in many instances it has been given the preference

ous points of the winding in order that a number of potentials may be obtained. The compensator is provided with a double-throw oil switch, by means of which, after starting, the coils are cut out and the full voltage of the line applied to the motor.

Where motors are located near and operated from a bank of transformers, it is often practicable to obtain the reduced potential necessary for starting by means of taps brought out from the secondary

istance to a set of contacts parallel to the shaft. A lever on the outside of the motor operates a sliding collar, which is arranged to pass over the contacts, so that the resistance, on starting the motor, can be short-circuited step by step. The whole device is very substantial, and has no delicate parts, and, with proper care of the contacts, does not give any trouble.

Further details regarding the two types referred to and others in the series can be obtained by addressing the maker, Stan-



# CONSTRUCTION DEPARTMENT.

## TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY.

The Manufacturers' Record seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

\*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

### ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

### WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

## ALABAMA.

Birmingham—Telegraph Company.—Postal Telegraph Co. has decided to extend its lines from Birmingham to Nashville, Tenn., by way of Huntsville, Ala.; general offices at Atlanta, Ga.

Birmingham—Cold-storage Plant.—A. A. Gambill and associates propose building a general cold-storage plant, as reported last week. They contemplate investing about \$100,000. The building will be 40x150 feet in size. Wm. Ernest Spink is architect and engineer in charge.

Birmingham—Bottling Plant.—Crawford Johnson and L. J. Haley, Jr., have incorporated the Birmingham Coca Cola Bottling Co. The capital stock is \$15,000.

Birmingham—Coal Mines.—Lucille Coal Co. has been reorganized, and will continue the development of its coal properties. T. H. Moore is general manager.

Birmingham—Ice Plant.—Ensley-Pratt Ice Co., reported incorporated last month with \$25,000 capital, has purchased an established plant.

Birmingham—Soda water Factory.—L. C. Johnson of Birmingham and J. G. Thomas and G. S. Thomas of Atlanta, Ga., have incorporated the Nervola Company, capital stock \$2000, to manufacture soda water.

Birmingham—Coal Mines.—R. R. Stobert, W. H. Loper and C. Meriwether have incorporated the West Pratt Coal Co. to develop coal mines. The capital stock is \$10,000, with privilege of increasing to \$100,000.

Birmingham—Hardware.—S. M. and E. F. Smith have incorporated the Syd Smith Hardware Co., with capital stock of \$20,000.

Fort Payne—Iron Foundry.—William J. Dodge and associates of Gadsden, Ala., reported last month as having purchased the Caldwell foundry, have organized the Valley Foundry Co. to operate the plant. It was previously stated that \$25,000 is the capital.

Gadsden—Iron Furnace.—Alabama Consolidated Coal & Iron Co., T. G. Bush, president, Birmingham, has blown in its new fur-

nace at Gadsden, which will have an output of 250 tons of iron per day.

Gurley—Telephone Line.—Huntsville & Guntersville Telephone Co., offices at Huntsville, Ala., will extend its lines from Gurley to a point sixteen miles distant.

Headland—Cotton Gin.—V. H. King & Bro. will build cotton gin.

Jasper—Tannery.—Jasper Tanning Co., reported organized last week, has a paid-up capital of \$12,200, instead of the \$7500 mentioned. This company will operate a plant with daily capacity of 40 to 100 sides of finished harness leather, and anticipates doubling its investment within a year.

Lafayette—Water-works.—The town contemplates constructing a system of water supply, and is now considering the project. Address the Town Clerk.

Mobile—Ice Plant, etc.—Mobile Fish & Oyster Co. has been organized with capital stock of \$40,000 and purchased site for the establishment of a 40-ton ice plant. Manuel Canizales is president. Antonio Balladeres, Thos. Price and others are interested.

Omega—Cotton Ginnery.—American Cotton Compress Co. has let contract for erection of ginnery of four 30-saw gins.

Pine Hill—Lumber Plant.—P. Vrendenburg Lumber Co. of Springfield, Ill., has purchased plant of Pine Hill Lumber Co., price reported as \$50,000, and will expend \$12,000 for improvements.

Sheffield—Land Improvements.—Incorporated: Sheffield Investment Co., with a capitalization of \$25,000; C. McLaughy, president and treasurer; S. B. McTyer, vice-president; E. D. Johnson, secretary; directors, J. W. Worthington, Jas. T. Johnson, S. B. McTyer, S. McLaughy, with others; purpose, development of real estate.

Thomas—Iron Furnace.—Republic Iron & Steel Co., offices at Birmingham, has blown in its No. 2 furnace, which has been undergoing repairs for several weeks; daily output from 200 to 250 tons of iron.

Troy—Ice Plant.—Standard Chemical & Oil Co. has let contract for 15-ton ice plant.

## ARKANSAS.

Black Rock—Realty.—Southern Realty & Investment Co. has been chartered; capital stock \$100,000. C. T. Burns of Black Rock is president; R. F. Fltz of Boston, Mass., vice-president; J. W. Whittinghill of Jonesboro, Ark., secretary; D. C. Wilcox of Pine Bluff, Ark., treasurer.

Greenwood—Zinc Mines.—R. T. Powell is organizing a company, to be capitalized at \$250,000, to develop about 12,000 acres of zinc lands. It is stated that the Missouri Trust Co. of St. Louis will furnish the capital.

Harrisburg—Electric-light Plant.—G. T. Garvey has franchise to establish electric-light plant, as stated last week, and contemplates installing a 500-lamp equipment. No further details have been decided.

Harrison—Zinc Mines.—The report of last week concerning the White River Zinc Mines Co. was not correct. Geo. L. Mallory of Little Rock, who was said to be president, says that the company was talked of, but did not organize.

Little Rock—Woodworking Plant.—Marquette Timber Co., recently organized with S. M. Savage, president, etc., has ordered machinery for its plant, and is now installing the equipment. Daily capacity to be 100,000 feet of dressed lumber, and end-matched hardwood flooring will be made a specialty.

Little Rock—Hardware.—City Hardware Co. has been chartered as successor to Fones Bros. Hardware Co. The authorized capital stock is \$50,000, of which \$20,000 has been subscribed; L. K. Mandlebaum, president; F. H. Niebrugge, vice-president; E. B. Garland, secretary; J. B. Lensing, treasurer.

Little Rock—Construction Company.—Incorporated: Central Construction Co., with headquarters at Little Rock and Shawnee, O. T. The capital stock is \$500,000; W. R. Abbott, F. A. Mollitor, Fort Smith, Ark.; J. M. Spaulding, Greenfield, Ark.; J. W. McLeod and Willard Johnston of Little Rock; C. M. Cade of Shawnee, and R. H. Drennan of Oklahoma City, O. T., incorporators.

New Lewisville—Warehousing.—Chartered: Planters' Warehouse Co., capital stock \$4000, by W. W. Carloss, E. B. Daniel, W. B. Nash, J. S. Owen and others.

Russellville—Cotton Gin, etc.—Incorporated: Winn Gin Co., for ginning cotton, grinding corn and wheat, etc. The capital stock is \$15,000; Oscar H. Winn, president and

treasurer; Walter G. Harkey, vice-president, and M. L. Winn, secretary.

Texarkana—Electric-light Plant.—College Hill Light & Traction Co. has been incorporated, with capital stock of \$195,000, to build electric-light plant, etc. E. K. Smith is president, and E. J. Spencer, secretary.

## FLORIDA.

Bartow—Cold-storage Plant.—Crystal Ice Works contemplates adding a cold-storage department for public service.

Brooksville—Ice Plant.—J. F. Hedick and associates contemplate the erection of an ice plant.\*

Palatka—Celery Cultivation.—J. A. Blair Celery Co. has been organized to plant ten acres of land in celery, etc. J. A. Blair is president, and H. W. Kilpatrick, secretary.

Palmetto—Fertilizer Factory.—A company has been organized, with capital stock of \$35,000, to establish a fertilizer factory. Names of interested parties not stated.

## GEORGIA.

Atlanta—Orchards.—O. L. Reed, E. B. Reed, L. S. Turner and T. J. Eady have incorporated the Reed Pecan Co., to conduct pecan, orange and peach orchards. Capital stock is \$50,000, with privilege of increasing to \$100,000.

Atlanta—Book Company.—A. B. and B. A. Buchl have incorporated the Buehl Book Co., with an authorized capital of \$25,000.

Clarkesville—Woodworking Plant.—T. J. Bentley, reported last week as to establish hub and spoke factory, will erect building 24x60 feet, two stories high, and install machinery for making bent felloes, hubs, spokes, etc. Water-power will be used, and the equipment has been installed.\*

Louisville—Electric-light and Water Plants. The city has definitely decided upon the construction of the water-works and electric-light plant recently reported, and Moore & McCrary of Atlanta, Ga., have completed the plans and specifications. Proposals for bids to supply machinery and construct the systems are now being invited. M. W. Rhodes is mayor.\*

Macon—Saw-mill.—T. M. Willingham will build a saw-mill.

Neal—Cotton Mill.—Neal Manufacturing & Power Co., reported in July as applying for charter, has organized with H. V. Neal of McDonough, Ga., president; E. T. Whatley of Newnan, Ga., vice-president, and Andrew J. Kelly of Boston, Mass., general manager. This company's purpose has been previously announced as to develop water-power, erect electric plant for transmission and build a cotton mill of 30,000 spindles and 1050 looms. Spinning mill to be 128x285 feet, two stories high; weave sheds 228x303 feet, two stories high. The authorized capital is \$1,000,000. Adolph Suck, mill architect, 179 Summer street, Boston, Mass., is a director, and is to prepare the plans and specifications.

Sunset—Saw-mill.—A. James & Co. of Pineville, Ga., have purchased 1200 acres of timber land, and will build saw-mill near Sunset.

Thomson—Cotton Mill.—J. E. Smith Manufacturing Co., reported last week as contemplating the enlargement of its mill, will take definite action at annual meeting September 2.

Warrenton—Cotton Ginnery.—F. L. Howell is installing additional gin.

Waycross—Mercantile.—C. H. Andrews, J. M. Wells and J. G. Justice have incorporated the Andrews-Wells Company, with a capital stock of \$6000.

## KENTUCKY.

Ashland—Newspaper.—Crisis Publishing Co., with \$10,000 capital stock, has filed articles of incorporation; E. W. Crumbaugh, William Blockinger and Frank C. Fisher, incorporators.

Ashland—Coal Mining, etc.—Incorporated: Montrose Lands & Mining Co., to develop coal and other mineral lands; capital \$100,000; incorporators: J. C. C. Mayo, Geo. B. Vaughn, D. J. Chandler, Paintsville, Ky.; S. S. Willis and A. M. Kelly, Ashland, Ky.

Carrollton—Lumber.—Incorporated: Adkinson Brothers Co., capital \$16,000, by A. C. and J. B. Adkinson, H. Schurman and G. B. Winslow.

Cloverport—Pearl-button Factory.—Valley Button Co. of Newport, Ark., is reported as contemplating the establishment of a plant at Cloverport.

Corydon—Coal Mines.—Edward D. Ball and O. T. Koontz, who have been prospecting for

coal, have optioned lands and begun opening mines.

Elkhorn—Water-works.—The city will issue \$20,000 in bonds for the construction of water-works and for school purposes. Address City Clerk.

Freemont—Telephone System.—Canada Creek Telephone Co. has been incorporated, with capital stock of \$5000, to establish a telephone system.

Hawesville—Plow-fender Factory.—Kentucky Plow Fender Co., capital stock \$10,000, has been organized to manufacture a patent plow fender; president, R. Heibach; secretary, J. C. Böling; treasurer, J. P. Ender; manager, J. S. Taylor.

Hickman—Telephone System.—Hickman County Telephone Co., capital \$5000, has been incorporated by Thos. Emerson, B. A. Boone and J. R. Scarborough.

Hopkinsville—Cannery.—W. T. Fowler and W. R. Brumfield propose organizing \$20,000 company to establish cannery.

Lexington—Water-power Development.—It is rumored that W. J. McDargh, Clarence P. Folsom and Arthur Geisler of Dayton, Ohio, are engineers in charge of preparing plans and specifications for the proposed development of 20,000 horse-power from Cumberland river at the falls.

Lexington—Gas and Oil Wells.—Dudley Oil & Gas Co., reported incorporated last week with \$500,000 capital, owns about 10,000 acres of land, which will be developed for oil and gas. S. F. Rock is president; J. R. Morton, vice-president, and S. M. Wilson, secretary.

Louisville—Implements.—Robert Ridgeway and others have incorporated the Implement Transfer Co., with capital stock of \$5000.

Louisville—Railroad Shops.—Louisville & Nashville Railroad Co. has decided upon final plans for its extensive machine shops announced some months ago as to be established. The plant will cover twenty-five acres, and about \$2,000,000 will be the cost of the various buildings and machinery. Iron foundry will be 90x443 feet, wheel shop, freight-car storehouse and pipe-shop building 90x202 feet, smith shop 150x402 feet, erecting shop 171x218 feet, freight-car repair shop 400x145 feet, boiler shop 78x140 feet, planing mill 180x202 feet; there will also be other buildings, all to be constructed of brick and stone. W. H. Courtney, assistant chief engineer, is stated to be in charge.

Louisville—Water-power Development.—It is stated that capitalists are planning the development of the falls of the Ohio river to furnish power for industrial plants on both sides of the Ohio river. The development of this power has frequently been talked of, and it is now reported at Louisville that R. W. Gathright, Jesse Gathright and other capitalists of Louisville and capitalists of Chicago have submitted a plan to the national government, which, if accepted, will insure the establishment of an extensive water-power plant to transmit power by electricity. An investment of from \$4,000,000 to \$5,000,000 is said to be contemplated.

Louisville—Malleable Iron Works.—J. L. Smyser and R. M. Kelly, Jr., are organizing a company for the establishment of a malleable iron foundry. They will probably capitalize at \$250,000.

Louisville—Machine Plant.—Kentucky Gear & Machine Co., reported last week as incorporated with \$20,000 capital, has elected Geo. Binder, president; A. A. Butterwick, vice-president; Julius A. Stege, secretary, and E. G. Butterwick, treasurer. Company has secured building 25x200 feet, two stories high, and will install machine plant, making a specialty of the cutting of gears by the company's patented machine. Gottlieb Binder is engineer in charge.\*

Louisville—Phosphate Plant.—A. T. Dukes, Frank B. Polly, L. W. Batts, L. M. Render and J. T. Welch have incorporated the Century Phosphate Co. to mine and manufacture phosphate and fertilizers generally. The capital stock is \$50,000, with privilege of increase to \$100,000.

Ludlow—Can Factory.—Norton-Edgar Can Co. has been incorporated, with capital of \$100,000; H. M. Norton, president; M. W. Edgar, vice-president, and J. J. Moser, treasurer. Company has leased plant formerly occupied by American Can Co., has installed small machine shop and placed contract for canmaking machinery.

Marion—Zinc Mines.—Ohio Valley Mining Co., mentioned last week as increasing capital by \$100,000, will develop the lead and zinc veins which it has uncovered, and contem-

plates building mill and separator and smelter; Joe A. Farmer or James E. Chittenden, engineer in charge.\*

Owensboro—Telephone System.—Incorporated: Rural Home Telephone Co., capital stock \$25,000, by H. K. Cole and J. K. Woodruff of Owensboro, and F. A. Lundquist of Chicago.

Paducah—Street Improvements.—The city council has arranged for an election in November to vote on issuing \$60,000 bonds for the proposed street improvements. Address The Mayor.

Paducah—Hospital, etc.—City will vote in November on issuing \$25,000 bonds for erection of hospital and \$25,000 for market-house. Address The Mayor.

Vine Grove—Electric-light Plant.—It is rumored that B. C. Hill is interested in a movement for the establishment of electric-light plant.

Whitesburg—Electric Plant.—Whitesburg Electric Light & Power Co. has been organized, with capital stock of \$15,000, to establish electric-light and power plant.

#### LOUISIANA.

Bayou Goula—Cotton Gin.—Geo. M. Murrell Co. is reported to build a cotton gin.

Hammond—Lumber.—Hammond Lumber Co. has increased capital stock from \$10,000 to \$100,000.

Jennings—Iron Works.—Haywood Bros. & Dobbin will rebuild their iron works, burned with a reported loss of \$60,000.

Lafayette—Irrigation System.—C. S. Babin is preparing plan for construction of an irrigation system.

New Orleans—Tobacco Sauce Factory.—John A. McIlhenny is completing a large addition to his tobacco sauce factory.

New Orleans—Rubber Plantations.—Incorporated: The Southern Rubber Plantation Co., Limited, with capital stock of \$1,000,000, for cultivating rubber and other products, manufacturing lumber, etc. Albert Mackie is president; A. R. Blakely, vice-president; P. H. Schneidau, treasurer, and H. C. Willesen, secretary.

#### MARYLAND.

Baltimore—Hollowware Works.—Jones Hollowware Co. will increase capital stock of \$50,000 to \$75,000.

Baltimore—Glass Works.—Charles Nivison and John Coady of Reading, Ohio, have about decided to establish glass-bottle works at a cost of \$75,000. It is proposed to install a 20-ton continuous tank for a daily production of 500 gross of bottles for the liquor trade.

Baltimore—Telephone Exchange.—Maryland Telephone Co. will build branch telephone exchange at Forest Park, a suburb, at a cost of about \$20,000.

Baltimore—Manufacturing Lamps, etc.—Baltimore Lighting Co., for manufacturing lamps, burners, etc., by William H. Swindell, William B. Myer, Henry B. Christhill and James F. Gillespie of Baltimore, and Russell Thayer of Philadelphia. The capital stock is \$10,000.

Baltimore—Biscuit Factory.—Hargrave Biscuit Co. has been incorporated by Joseph W. Hargrave, Epps Hargrave, Jr., Stephen G. Van Lili and James W. Chapman. The capital stock is \$50,000. Factory will be established, building to be four stories high, with 20,000 square feet of floor space; offices at 443 North street.\*

Baltimore—Box Factory.—Thienmyer Box Co. will be incorporated to acquire and continue the wooden-box factory of Thienmyer Bros. J. H. Thienmyer will be president, and Wm. B. Thienmyer, secretary-treasurer. The plant will be enlarged to use about 100,000 feet of lumber daily.

Hagerstown—Limestone Quarry, etc.—Incorporated: Potomac Valley Lime & Stone Co., with a capital stock of \$20,000, to quarry limestone, etc. The incorporators are James P. Harper, J. B. Sweeney, Dr. J. McP. Scott, John H. Hoffman and W. B. Scott, Jr.

Mt. Savage—Coal Mines.—George's Creek-Bald Knob Coal Co. has been incorporated by John A. Clark and James R. Linn of Fairmount, W. Va.; Charles MacKall and Leonard R. Conates of Baltimore, Md., and Uruer G. Carl of Cumberland, Md. The capital stock is \$100,000. Company will operate its extensive holdings of coal properties near Mt. Savage, Barrelesville and Wellersburg. Chas. MacKall is president; John A. Clark, vice-president, and James R. Linn, secretary and treasurer; general offices, 614 Continental Trust Building, Baltimore.

#### MISSISSIPPI.

Biloxi—Electric Plant.—Biloxi Electric Light Co. is preparing to install a plant to supply power, and will offer special induc-

ments to manufacturers who could use small motive power.\*

Columbus—Knitting Mill.—It is reported that George W. Kavanaugh of the F. W. Kavanaugh Manufacturing Co., Corcoran, New York, and associates will establish a knitting mill at Columbus. It is proposed to organize company with capital stock of \$150,000.

Gulfport—Lumber Company.—Incorporated: Gulfport Lumber Co., capital stock \$10,000, by W. P. Hayne, A. S. Hinton and others.

Hattiesburg—Cannery.—T. W. Wade of Springfield, Mo., proposes organizing company to establish cannery in Hattiesburg.

Itabena—Lumber Plant.—Rucker Bros. (reported recently under Leflore county as purchasing 5500 acres of timber land, etc.) will build plant with daily capacity of 40,000 feet of plain and quartered oak, ash, gum and other hardwoods. For next thirty days correspondence should be addressed to W. H. Rucker, Lawrenceburg, Ind.\*

Kola—Lumber Company.—Chartered: Kola Lumber Co.; capital stock \$50,000; incorporators, Mulford Parker, Jas. McCormick, T. F. Butler and N. N. Parker.

Leland—Ice and Refrigerating Plant.—Leland Ice & Cold Storage Co. has let contract for 40-ton refrigerating and 20-ton ice plant.

Meridian—Cotton Oil Mill, etc.—Southern Oil & Fertilizer Co., reported organized some months ago with \$75,000 capital, has built a plant for manufacturing cottonseed oil and fertilizer. A. H. George is president.

Rosedale—Pearl-button Factory.—It is rumored that Philip Joest and J. O. Wilson will establish a pearl-button factory.

Shelby.—Incorporated: McKee & Henderson Company, capital stock \$10,000, by R. W. McKee, Jr., and others.

Yazoo City—Ice Plant.—People's Ice Co. has decided to install an additional 25-ton machine.

#### MISSOURI.

De Soto—Water-works.—The city has decided to build the proposed water-works plant (for 7000 inhabitants), and E. C. Hehn of East St. Louis, Ill., is the engineer in charge now preparing plans and specifications and estimates of cost. An election will be called to vote bonds after cost has been determined; A. F. Slawson, mayor.

Jefferson City—Stove Foundry.—J. A. Kendall, Brutus Riggs and M. E. Munsell have incorporated the Kendall Stove Co., with capital stock of \$24,000.

Joplin—Mining, etc.—Chartered: Lyon Mining & Development Co., capital \$50,000, by Bert W. Lyon, E. D. Nix and Charles W. Bartlette.

Kansas City—Grain Company.—Chartered: Linton-Williams Grain Co., capital \$10,000, by Fred R. Linton, Addison Clark and Harry E. Williams.

Mountain Grove—Telephone System.—The Mountain Grove Telephone Co., with \$10,000 capital, has been organized to connect by telephone Mountain Grove and other towns. The directors are E. H. Farnsworth, W. S. Candler, L. H. Slaughter of this city, L. M. Fenner of Buckhart, Mo., and B. V. Morrie of Rockbridge, Mo. E. H. Farnsworth is president; Thomas W. Hackworth, secretary, and L. H. Slaughter, treasurer.

Perryville—Mercantile.—Chartered: Rosier Mercantile Co., capital \$20,000, by P. A. S. J., J. R. and F. A. Rosier.

Poplar Bluff—Handle Factory.—Storm Bros. of Walnut Ridge, Ark., will establish a handle factory at Poplar Bluff; building to be 60x100 feet.

Richmond—Water-works Improvements.—The city has awarded contract to W. Klersted of Liberty, Mo., at about \$20,000 for water-works improvement.

Springfield—Iron Works.—Galena Iron Works Co., has been incorporated, with a capital stock of \$6500.

St. Louis—Boiler Works.—John O'Brien Boiler Works Co. will arrange at once to rebuild and re-equip its plant damaged to the extent of \$80,000 by fire.

St. Louis—Mercantile.—Chartered: Garzouzi Mercantile Co., capital stock \$10,000, by Jacob Garzouzi, George Garzouzi and Anna Garzouzi.

St. Louis—Agricultural Implements.—Chartered: Southwestern-Port Huron Company, capital stock \$100,000, by C. B. Hunt, D. C. Kinch, H. R. Hoyt, C. A. Harrington, E. D. Smith and F. R. Scheel, to buy and sell agricultural implements and acquire the business of Port Huron Company, Limited.

St. Louis—Drugs.—N. J. Hatfield, M. C. Kalis and others have incorporated the Era Pharmaceutical Co., with capital stock of \$10,000.

#### NORTH CAROLINA.

Chadbourn—Lumber Plant.—J. A. Brown, D. C. Whitted, M. F. Lenhart, R. K. Moors and others have incorporated the Chadbourn Manufacturing Co. for manufacturing lumber. Capital stock is \$25,000.

Charlotte—Gold Mines.—Hercules Gold & Copper Co. has begun the development of the St. Catherine and Rudisill gold mines near Charlotte, and may possibly build a large smelter.

Clinton—Saw-mill.—H. K. Bennett and Troy Faircroft will build a saw-mill. Machinery said to have been ordered.

Clinton—Saw-mill.—J. H. Register and E. R. Powell will build a saw-mill. It is said the machinery has been ordered.

Dillsboro—Flour Mill.—Dillsboro Milling & Manufacturing Co., reported last week as incorporated with \$25,000 capital, takes the place of what was to be the Dillsboro Roller Mills. Equipment has been purchased to roll wheat, grind corn and manufacture feed, and in the future furniture will be manufactured.

Elizabeth City—Educational.—Chartered: Albemarle High School Co., with authorized capital of \$50,000, by C. E. Kramer, J. Q. A. Wood, W. J. Woodley, P. S. Shipp, J. W. Martin and others.

Gastonia—Harness Factory.—Walter Head and Hunter Craig will organize the Craig & Head Harness Co. and establish general harness factory.

Greensboro—Cotton Mill.—W. I. Young, 1020 Empire Building, Atlanta, Ga., and associates will build a mill at Greensboro with an initial investment of \$50,000, which is to be doubled soon after the plant is in operation. Special cotton textile fabrics, details of which are not ready for announcement, will be manufactured.

Greenville—Brick Works.—Dr. Fountain will establish brick works.

Greenville—Brick Works.—R. A. Tison of Greenville and Burwell Reddick of Suffolk, Va., will establish brick works at Greenville. It is said the machinery has been ordered.

Henderson—Drugs.—Chartered: Thomas Drug Co., capital stock \$3000, with privilege of increasing to \$50,000, by John T. Thomas, P. H. Thomas, W. A. Hunt, A. H. Houff, S. S. Parham, J. H. Brodie, C. A. Lewis and others.

Hickory—Water-works.—The city has ordered an election for October 12 to vote on issuing \$60,000 new bonds for the construction of its proposed water-works, and on \$10,000 for street improvements. Address The Mayor.

Kinston—Brick Works.—Vick Bros. will establish brick works.

Kirksey—Monazite Mines.—John R. Kirksey has completed the purchase of 245 acres of land, and will develop monazite sand mines. A hydraulic mining equipment will be installed.\*

Monroe—Gold Mines.—J. M. Fairley of Monroe and C. L. Harriman are endeavoring to interest Louisville (Ky.) capitalists in the development of gold-bearing properties near Monroe.

Raleigh—Tobacco Factory.—Raleigh Leaf Tobacco Co. has decided to manufacture tobacco in its various forms. The capital is to be increased from \$10,000 to \$20,000.

Rocky Mount—Tobacco Factory.—J. O. W. Gravely states that there is no truth in the report that he is interested in establishing the tobacco factory mentioned last week.

Shore—Distillery.—Chartered: I. C. Shore Distilling Co., with total authorized capital stock of \$50,000, by I. C. Shore, H. F. Shore, J. B. Shore and E. E. Shore.

Troy—Supplies.—Incorporated: Troy Supply Co., with authorized capital of \$30,000, by D. E. Pemberton, J. W. Lemons, C. A. Armstrong of Troy, and W. M. Taft of Mt. Gilead, N. C.

Waghtown (P. O. Winston) Wagon Factory.—C. F. Nissen will erect additional building and install additional machinery for increasing the capacity of his wagon factory.

Waxhaw—Telephone System.—Chartered: Waxhaw Telephone Co., with authorized capital stock of \$5000, by C. S. Massey and J. E. Heath of Waxhaw, J. J. Crow and R. B. Redwine of Monroe, N. C.

Waynesville—Electric-light Plant.—It is rumored that John Farrior will install electric plant for lighting residence.

#### SOUTH CAROLINA.

Bishopville—Mercantile.—R. A. Morrow and W. C. Heath of Monroe, S. C.; C. S. Massey of Waxhaw, N. C., and others have incorporated Heath Massey Morrow Company, with capital stock of \$30,000, and privilege of increasing to \$100,000.

Cheraw—Electric-light Plant.—City council has awarded contract for its proposed electric-lighting plant, to include both arc and incandescent system. Standard Electric Co., Norfolk, Va., has the contract.

Columbia—Cotton Mill.—Capital City Mills has begun erection of additional building, and will order additional machinery, including 8648 spindles and seventy looms.

Denmark—Mercantile.—Incorporated: Denmark Dry Goods Co., capital stock \$3000, by J. A. Creighton and G. C. Creighton of Orangeburg, S. C., and T. D. Creighton of Barnwell, S. C.

Easley—Cheese Factory.—Cedar Rock Cheese Co. is the title of company mentioned last week as organized to establish cheese factory. C. G. Voigt is engineer in charge.

Gaffney—Tin Mines.—S. S. Ross will install equipment for mining tin ore which was recently discovered on his property.\*

Georgetown—Mercantile.—Incorporated: J. H. Loyal Co., capitalized at \$10,000, by J. H. Loyal, B. O. Bourne and D. N. Bourne.

Greenville—Cotton Mill.—Woodside Cotton Mills, previously reported as to build for 10,000 spindles and 300 looms, has completed buildings and installed 11,280 spindles and 300 looms.

Greenville—Mercantile.—Chartered: J. A. Bull Company, capitalized at \$8000, by J. A. Bull, W. P. Bull, D. N. Bull and W. B. Wheeler.

Greenville—Broom Factory.—C. W. Griffin and John C. Landrum will establish broom factory.

Mt. Pleasant—Telephone System.—Incorporated: Mt. Pleasant Telephone Co., to build telephone line from Christ Church to Mt. Pleasant. The capital is \$2500; O. A. Hamlin, O. H. Patjens, Ed Flacken, W. D. Hamlin and Lee Royall, incorporators.

Greenville—Incorporated: J. Thomas Arnold Company, with a capital stock of \$25,000, by J. Thomas Arnold and G. C. McEachern. Myrtle Beach—Shingle Mills.—Incorporated: The Shingle Manufacturing Co., with a capital stock of \$10,000, by J. E. Bryan, Frank W. Burroughs and Hal L. Brooks.

Pelzer—Cannery.—J. E. Adger will establish a cannery.\*

Timmonsville—Timmonsville Oil Co. will own and operate the cottonseed-oil mill reported last week, and the plant will soon be ready to crush seed. All machinery required has been purchased. W. R. Eve, Jr., is manager.

Union—Cotton Brokers.—Chartered: Goss & Arthur, cotton brokers, capital \$10,000, by H. L. Goss and W. D. Arthur.

#### TENNESSEE.

Athens—Woolen Mill.—Athens Woolen Mills has contracted for thirty-five additional looms.

Chattanooga—Phosphate Mines.—H. W. Gonia of Dayton, Tenn., representing a company of which he is manager, has purchased and will continue developing the Edington phosphate mines near Chattanooga. It is said that \$10,000 will be expended for additional machinery.

Chattanooga—Natural-gas System.—A company will be organized and incorporated, with a capital stock of \$500,000, to develop natural gas some miles from Chattanooga, and construct pipe line to this city for general supply. W. H. Baggs, Waldron, Tenn.; C. M. Reed, Terandem, Pa.; J. F. Anderson, Butler, Pa., and other Eastern capitalists are interested.

Chattanooga—Foundry and Machine Shops.—Herron-Brady Pump Co. has decided to add machine and foundry shops at a cost of about \$15,000.

Chattanooga—Gold Mines, etc.—Montlake Coal & Coke Co., incorporated recently with capital of \$25,000, has elected H. H. Bukuo, president and general manager; T. W. Nixon, vice-president, and S. J. Bukuo, secretary. Company has leased 1200 acres of land near Chattanooga, and is now preparing to open mines with daily capacity of 200 tons. Coke ovens will be erected later on.

Harriman—Coal Mines.—Archie McDonald, Daniel Denny, W. E. Knight, R. T. Knight and Harry Swift have incorporated the Winfield Coal Co., with capital stock of \$25,000.

Johnson City—Telephone System.—Cumberland Telephone Co. has asked the city council for franchise; general offices at Nashville.

Madisonville—Knitting Mill.—Madisonville Knitting Mills will increase capacity by the installation of twenty-five additional machines. Contract for equipment reported as awarded.

Memphis—Druggists' Sundries.—Nashville Glass & Sundry Co. (reported last week under Nashville as increasing capital from \$25,000 to \$50,000) has changed name to the



Southern Sundry Co., with headquarters at Memphis.

Memphis—Bridge Works.—The company reported last month as to be organized to establish bridge works will be known as the Memphis Bridge Co. It has applied for charter with the capital stock placed at \$50,000. W. M. Hewitt, Robert L. Owens, George L. Austin and C. O. Orton are the incorporators.

Memphis—Buckle Works.—Standard Wire Bale Buckle Co., R. H. Felton, secretary and treasurer, Weatherford, Texas, will establish a plant at Memphis.

Nashville—Drug Manufacturers.—Spurlock-Neal Company, reported last week as to remodel building and manufacture drugs, etc., has engaged Brown & Brown as architects in charge. Building will be four stories high, 62x137 feet. About \$100,000 will be invested in complete plant.\*

Newport—Cornmeal Mill.—Newport Mill Co., building, reported last week, will be 45x120 feet in size, and the equipment of the cornmeal mill will have a daily capacity of 120 bushels. E. S. Early is the architect in charge. Water power is to be used, but the meal machinery will not be purchased this year. The electric-light plant reported as contemplated has been decided on, and the machinery purchased. Water-wheels required have also been purchased.

Knoxville—Water-power Development.—The Knoxville Power Co. is preparing to advertise for bids on the construction of dam to develop water-power in connection with its plans, as previously mentioned. It is the company's purpose to generate electricity and transmit to Knoxville. Gen. John T. Wilder is president.

Knoxville—Foundry and Machine Shops.—Southern Foundry & Machine Co. has completed all arrangements for rebuilding its plant, recently destroyed by fire. Capital stock will be increased from \$55,000 to \$100,000.

Memphis—Furniture.—Incorporated: Stewart-Watson Furniture Co., by J. A. Stewart, P. S. Stewart, George Watson, A. M. Watson and James W. Hunt. Capital stock is \$5000.

Rives—Cotton Gin.—J. B. Candler will build cotton gin.

#### TEXAS.

Arlington—Mercantile.—Incorporated: The Model Store, capital stock \$5000, by Terrell Collins of Alvord, Texas; E. T. Collins of Fordyce, Ark., and T. F. Yates of Greenville, Texas.

Austin—Water-works.—State Water and Light Board may possibly establish plant for supplying water to the various State buildings. It is reported that \$155,000 is available for the purpose.

Beaumont—Cigar Company.—Incorporated: Gulf Cigar Co., capital stock \$5000, by W. H. Quow, G. R. Wilson and Wilfred Pole.

Beaumont—Cotton Compress.—Beaumont Compress Co. has been organized, with a capital stock of \$30,000, to build compress lately projected; T. S. Reed, president; W. P. H. McFadden, vice-president; D. Woodhead, secretary and treasurer.

Brownsville—Electric-light and Water Plants.—John W. Maxey of Houston, Texas, has obtained franchise for constructing electric-light plant and water-works at Brownsville.

Corsicana—Water-works.—The city council has appointed a committee to investigate the feasibility of constructing a municipal water supply system. Address The Mayor.

Corsicana—Telephone System.—French & Griffin have received franchise to construct telephone system in Navarro county.

Dallas—Woodenware.—H. C. Miller, C. R. Wagstaff and H. F. Scheer have incorporated Miller-Wagstaff Woodenware Co., with capital stock of \$20,000.

Dallas—Building-block Plant.—O. J. Gorman & Co. will organize company to establish plant for the manufacture of patent concrete building blocks.

Dallas—Foundry.—S. W. Hardwick, E. C. Connor and C. A. Robertson are organizing the Southern Foundry Co., and will incorporate with a capital of \$5000. They have leased an established plant, which they will enlarge for general foundry work, making a specialty of the manufacture of saddlery.

Fort Worth—Sewer Extensions.—The city contemplates extending its present sewerage system into the residential district, at present without proper facilities. Piping of from six to twenty-four inches diameter will be required, and the expenditure amounts to \$30,000 if the improvement is decided upon later on. C. H. Zane-Cetti is chief engineer.

Galveston—Oil Wells.—Incorporated: Panchandle Oil Co., capital stock \$20,000, to develop and market oil; incorporators, J. H. Hill, C. M. D. Robinson, John E. Baily, J. Reymersroffer and Henry J. Runge.

Grandview—Lumber Company.—Incorporated: Grandview Lumber Co., capital \$15,000, by J. A. Hill, O. C. Walton of Grandview, E. E. Griffin of Itasca, Texas.

Holland—Cotton Gin.—Incorporated: Farmers' Gin Co., capital stock \$10,000, by N. E. Woodruff, P. W. Mitchell, J. B. Stewart, M. Armstrong and V. E. H. Reed, to build cotton gin.

Houston—Municipal Improvements.—The city council has passed an ordinance ordering an election on the issuance of \$750,000 in bonds for general municipal improvements, to include sewers, street paving, school buildings, etc. Action will be taken on this amount instead of the \$800,000, noted several weeks ago. Address The Mayor.

Houston—Oil Wells.—Greater Houston Petroleum & Pipe Line Co., recently incorporated with \$100,000 capital, has organized, purchased 1556 acres of oil land, and will at once drill for oil; 4500 additional acres have been optioned for later development. E. M. Hess is president; N. C. Abbott is vice-president, and E. C. Robertson, secretary; offices at 910½ Texas avenue.

Jefferson—Water-works.—The city has decided upon plans for the construction of its water-works lately reported, for which \$15,000 is available. J. H. Rowell, Sr., is mayor.\*

Lufkin—Sewer Extensions.—Angelina county will put in 3000 feet 12-inch sewer from courthouse to Brushy creek. E. B. Robb is commissioner, and P. A. McCarthy, C. E., is the consulting engineer.

Marlin—Water-power Electric Plant.—J. A. Martin and B. C. Nettles have purchased land adjacent to the falls on the Brazos river, and are having surveys and estimates made with a view to organizing company to develop water-power and build electric plant

Votaw—Oil Wells.—Incorporated: Miles Oil Co., capital stock \$25,000, by John Haynie, A. S. J. Simmons of Votaw, and C. F. Miles of Silsbee, Texas, to drill for oil.

Waco—Water-works.—The city has voted an issuance of \$500,000 in bonds for the construction of the water-works recently mentioned. The proposition to issue \$100,000 for electric-light plant was rejected. Address The Mayor.

Webster—Cannery.—A New York company capitalized at \$125,000 will establish a cannery near Webster. Possibly W. A. Coutant of Fort Worth, Texas, can state names and addresses.

#### VIRGINIA.

Clarksville—Steel Bridge.—Clarksville Toll Bridge Co. has been organized with Henry Wood, Jr., president, and contracted for construction of steel bridge 1300 feet long, spanning the Dan and Staunton rivers.

Coeburn—Coal Mines.—Incorporated: The Washington Coal Co.; capital \$25,000; James P. Mason, president; M. M. Morris, vice-president; S. W. Keys, secretary-treasurer.

Kimballton—Saw-mills.—Ohio Land & Lumber Co., reported incorporated several weeks ago, has elected A. W. Kerns, president and manager. Company has purchased 1000 acres of timber land, and will establish small mills. Mr. Kerns and four other Ohio parties form this company.

King and Queen—Cannery.—Incorporated: The Mantapke Cannery Co.; capital \$10,000; R. N. Pollard, president; W. P. Walker, vice-president; Thomas Latane, secretary.

Martinsville—Water-power Electrical Plant. It is reported that plans are on foot for the development of water-power property on Marrowbone creek and the erection of an

rights for thirty miles on both sides of the Appomattox river above Petersburg and the establishment of a power plant that will generate 10,000 horse-power of electrical energy every twelve hours. A power line capable of carrying 5000 to 6000 horse-power of electrical current will be built from the Appomattox river to Richmond. The dam which the company will build will make a lake extending many miles. Announcements as to this contemplated development were mentioned previously.

Richmond—Gasoline Engine Works.—Southern Machine Manufacturing Co. is preparing to issue \$30,000 of preferred stock for the purpose of enlarging and improving its gasoline engine and general machine works. A. C. Goode is president; offices at 1112 E. Main street.

Roanoke—Coal Mines and Coke Ovens.—J. W. Wayne, Louis A. Scholz and S. Henry Scholz have incorporated the Anchor Coal & Coke Co. for opening coal mines and manufacturing coke. The authorized capital is \$25,000.

Virgilia—Copper Mines.—Halifax Mining & Manufacturing Co. has been incorporated, with a capital stock of \$500,000, and absorbed the Halifax Copper Co. This company owns the Wall & Elliott mineral tracts near Virgilia; is now sinking shaft for copper, and will erect a mill and concentrated plant. Thomas A. Knauss of Columbus, Ohio, is president; H. A. Rodevaugh of Marysville, Ohio, vice-president, and O. E. G. Barron of Norfolk, Va., secretary-treasurer.

Virgilia—Copper Mines.—Motherlode Mining Co. has been incorporated, with capital stock of \$1,500,000, and organized for the development of about 220 acres of mineral lands near Virgilia, on which two shafts are now being sunk. J. H. Morong (formerly of Butte, Mont.) of Virgilia is president; George Morong of Virgilia, secretary-treasurer, and W. D. Elger, 18 Broadway, New York, vice-president.

West Point.—City has voted affirmatively on the proposition previously mentioned for issuing \$15,000 in bonds to construct water-works. Charles F. York, 1526 E. Biddle street, Baltimore, Md., is the engineer in charge. Proposals are now being invited. Address Town Clerk.\*

#### WEST VIRGINIA.

Chester—Lumber Mills.—Incorporated: Finley Bros. Co., to deal in and manufacture lumber, etc.; capital \$10,000; incorporators, Joseph N. Finley, J. W. Finley, R. A. Finley, Joseph McCoy, Chester, W. Va., and George A. Hasson, East Liverpool, Ohio.

Clarksburg—Chemical Plant.—Dispatches state that the Grasselli Chemical Co. of Cleveland, Ohio, will establish a branch plant at Clarksburg. It is reported that fifty acres have been purchased for the site, and that construction work will be begun at once on the first of a plant of twelve units.

Davis—Commercial.—Incorporated: Pullen Commercial Co., capital \$35,000, by William H. Beatty, Beverly, N. J.; David K. Boyd, Wayne, Pa.; Frank M. Etting, Philadelphia, Pa.; Clifford L. Pullen and Louis N. Walton, Jr., Beverly, N. J.

Fairmont—Coal Mines, etc.—Madeira-Hill-Clark Coal Co., reported incorporated last week with capital of \$200,000, is not a new enterprise, but is a reorganization of the Clark Coal Co., which operates an extensive coal and coke plant.

Fayetteville—Electric-light Plant.—E. W. Becker and associates have obtained franchise to establish electric-light and power plant.

Holden (P. O. at Wheeling)—Coal Mines.—United States Coal & Oil Co., previously organized, has begun the development of its 20,000 acres of coal lands, which were purchased at a cost of about \$600,000. A modern coal-mining plant is now being installed.

Huntington—Oil Wells.—Incorporated: Huntington-Lawrence Oil Co., to develop for oil and gas; capital \$50,000; incorporators, C. H. Hill, Proctorville, Ohio; C. F. Cole, W. O. Walton, D. C. Russell and F. B. Enslow of Huntington.

Kingwood—Lumber Plant.—U. M. Orr, J. M. Orr and E. Frank Pierce have purchased 558 acres of timber land, and will build an extensive lumber plant.

Leewood—Bottling Plant.—The Ford-Imboden Company, reported last week as incorporated with \$10,000 capital, will erect building 50x100 feet and install machinery for bottling beverages. About \$5000 will be invested. Address at Leewood or Box 283, Charleston, W. Va.\*

Martinsburg—Lumber Plant.—P. T. Noland Lumber Co., reported last week as incorporated with \$20,000 capital, will establish plant for manufacturing lumber, staves, etc. Some of the machinery required has already been contracted for. P. T. Noland is in charge.

**THE PROPOSAL COLUMNS** of the Manufacturers' Record are invaluable in securing competitive bids from first-class firms for bond purchases and all kinds of construction work, as railroad (steam and electric), electric light plants, public franchises, waterworks, sewerage, municipal improvements and all public utilities; and whenever the regular issue of the Manufacturers' Record is too late for quick bids, the Daily Bulletin of the Manufacturers' Record, which reaches financial people, engineers, architects, contractors, etc., throughout the country—North, South, East and West—can be used to great advantage, as it is published every business day in the year.

for transmission. It is believed that about 500 horse-power can be obtained. Engineer has not yet been selected.

Marshall—Water-works Improvements.—The city will arrange for extending its water mains. Address The Mayor.

Merkel—Cotton Gin.—Chartered: Farmers & Merchants' Gin Co., capital stock \$6000, by J. C. Culvert, G. B. Brown, George S. Berry and others.

Paris—Water-works Improvements.—The city has voted \$75,000 to build a water main seven miles long from water supply (surface lake) to a standpipe in the city limits. No contracts have been made. T. S. Hill is mayor.\*

Port Arthur—Water-works.—Port Arthur Water Co. has filed amendment to charter, increasing capital stock from \$100,000 to \$200,000.

Rusk—Saw-mill.—W. H. Knox will build a saw-mill.

San Antonio—Oil Wells.—Chartered: Capote Oil Co., capital stock \$100,000, by J. W. Mudge, J. W. M. Leon, H. D. Kilgore and W. C. Rigby of San Antonio, T. L. Johnson of Seguin, Texas, and Charles Schreiner, Kerrville, Texas.

Scurry—Canning Plant.—Scurry Preserving Co. will make extensive enlargements to its plant for canning, pickling and preserving.\*

Sisco—Coal Mines.—Lone Star Coal Co., reported chartered last week with \$100,000 capital, has installed machinery for mining 200 tons of coal daily. A brick plant, a paint factory, and possibly other industries may be established later. Will L. Vining is manager.

Texarkana—Lumber Company.—A. R. Ketchum, F. H. Ketchum and associates have incorporated the Iona Lumber Co.; capital stock \$20,000.

electric plant to transmit the power. About 600 horse-power, it is believed, can be developed at a cost of about \$60,000. J. L. and C. N. Sanders own the development rights. Efforts to develop this property were previously made.

McKenney—Lumber Plant.—McKenney Manufacturing Co., reported incorporated last week with \$25,000 capital, has an established plant for dressing lumber, about 50,000 feet capacity daily, and for making barrel heading. B. E. Cogbill is president; J. R. Beck, secretary and treasurer; L. G. Woodbridge, vice-president. H. M. Woodbridge and Silas Dunn are also of the company.

Newport News.—The H. J. Lewis Company, capital \$25,000, has been incorporated by H. J. Lewis, W. B. West, J. A. Willet and others.

Portsmouth—Bridge.—Plans have been accepted for construction of steel and concrete bridge to cost about \$1200. Fred Thompson, C. E., prepared the plans.

Portsmouth—Fertilizer Factory.—Macon Guano Co. has been incorporated, with capital stock of \$100,000. Wm. McK. Smith of Norfolk is president, and Charles E. Williams of Portsmouth, vice-president; purpose, to manufacture fertilizer.

Richmond—Fruit Cultivation.—Incorporated: Piedmont Fruit Corporation; minimum capital stock \$25,000, maximum \$50,000; Elmer C. Yetter, president; Ellef Ellis, vice-president; John H. Shaw, secretary and treasurer.

Richmond—Sheep dip Factory.—Kentucky Tobacco Produce Co., G. H. Lindenberger, president, Louisville, Ky., will build a plant for manufacturing sheep dip near Richmond.

Richmond—Water-power Electrical Plant.—Virginia Passenger & Power Co. is concluding negotiations for the purchase of riparian

## BUILDING NOTES.

\*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Martinsburg—Tailoring Co.—Chartered: Martinsburg Tailoring Co., capital \$10,000, by G. G. Bowen, C. W. Tabler and others.

New Martinsville—Oil Wells.—W. J. Criswell, L. G. Robinson, I. V. Morgan, J. W. Rush and others are organizing company to drill for oil. Capital stock will be \$35,000.

Parkersburg—Wood-bending Plant.—Parkersburg Bending Co. will apply for incorporation, and will be capitalized at \$50,000. It has purchased an established wood-bending plant near Parkersburg, which will be enlarged and improved.

Philippi—Stogie Factory.—Incorporated: Philippi Stogie Co., to manufacture stogies; capital \$15,000; incorporators, Charles F. Teter, A. S. Bradford, J. F. Manarin, L. D. Gail and E. H. Crim.

Piedmont—Furniture, etc.—Chartered: Home Furniture, Coffin & Livery Co., capital \$10,000, by D. E. Parke, Piedmont; G. Morehead, Bloomington, Md.; H. H. Randall, Savage, W. Va., and others.

Weston—Gas-pipe Line.—John F. Haden is buying right of way for the Eastern Gas Co., which will lay a pipe line to Philippi, Beilington, Elkins and Cumberland. Eight miles of pipe has already been laid and tested out of the Weston field.

Wheeling—Pottery.—Henry Beu contemplates establishing a pottery.

Wheeling—Metal Corrugating Plant.—W. Bates Wood and associates propose organizing company to establish plant for the manufacture of metal ceilings, sheeting, roofing, etc.

Williamson—Electric-light Plant.—Incorporated: Mingo Light & Ice Co., to operate electric-light plant; capital \$25,000; incorporators, J. W. Peters, S. D. Stokes, C. W. Elliot, B. B. Campbell and Thomas Elliot. It is reported that an established plant has been purchased.

## INDIAN TERRITORY.

Chickasha—Sewerage and Water-works.—City council has ordered an election on September 21 to vote on issuing \$75,000 of bonds for water-works and \$18,000 for sewerage. (The Secretary of War stated that the recent proposed issue of \$135,000 was in excess of the amount permitted for a town of this size.) Address The Mayor.

Davis—Water-works.—The city has annulled the water-works franchise recently granted, and will again ask for proposition. Address The Mayor.\*

Venita—Grocery.—Chartered: Ratcliff-Sanders Grocery Co., with \$20,000 capital stock, by J. W. Sanders, Davis Hill, E. N. and J. T. Ratcliff and L. W. Buffington.

## OKLAHOMA TERRITORY.

Anadarko—Publishing.—Incorporated: Democratic Publishing Co., with \$2500 capital, by L. W. Myers, J. W. Thompson, Fremont Boyle and others.

Oklahoma City—Mineral Developments.—Chartered: Oklahoma Gas, Oil, Coal & Water Co., with \$1,000,000 capital. The incorporators are D. B. Dugman, P. L. Wally, W. J. McNeal, all of Pittsburg, Pa.; M. B. Crow and O. P. Diffenderfer of Oklahoma City.

Oklahoma City—Mining, etc.—Incorporated: Southern Mining, Milling & Development Co., capital stock \$1,000,000, by G. W. Patrick, G. W. Garrison, J. S. Patrick, J. L. Silvers, S. E. Smith, T. L. Conger and others.

Oklahoma City—Printing Company.—Incorporated: Warden-Ebright Printing Co., with \$15,000 capital, by S. R. and J. H. Warden and H. H. Ebright.

## BURNED.

Camden, Ark.—Cotton compress owned by M. A. Joy of Terrell, Texas; loss reported as \$100,000.

Jennings, La.—Haywood Bros. & Dobbins iron works; loss reported as \$30,000.

Kinston, N. C.—T. E. Roberts & Co.'s tobacco stemmery; loss reported as \$19,200.

Louisville, Ky.—R. Mansfield & Sons' factory for store and office fixtures; loss reported as \$50,000.

Montgomery, Ala.—Conceh Pine & Lumber Co.'s plant; loss reported as \$70,000.

Salem, Va.—Salem Woolen Mills; loss reported as \$150,000.

St. Louis, Mo.—Evans-Smith Bedding & Upholstery Co.'s plant; loss reported to be \$30,000.

Wilson, Va.—Carolina Pine Lumber Co.'s plant; loss reported as \$5000.

Wants a Buggy Maker.—An experienced maker of buggies, who is prepared to invest a small amount of capital and take charge of factory, can hear of an excellent opportunity by addressing Stephen C. Bragaw, Washington, N. C.

Americus, Ga.—Association Building.—Y. M. C. A. will erect building to cost about \$1000.

Annapolis, Md.—Stables.—James A. Coster of Baltimore has contract for building stables at United States Naval Academy. His bid was \$21,900.

Baltimore, Md.—Residence.—W. Plunkett Stewart will build two-story frame residence to cost \$15,000.

Baltimore, Md.—Dwelling.—W. T. Murphy has contract for erecting residence for John R. Lemmert at Roland Park; building to be 33x32 feet, with back building 27x22 feet; heated by steam and lighted by electricity. The architect is Paul Emmart.

Baltimore, Md.—Gymnasium.—Joseph Wiesenfeld will remodel building at 302 W. Baltimore street into public gymnasium at a cost of \$5000. George C. Haskell is preparing the plans.

Baltimore, Md.—Church.—Wyatt & Nolting have completed plans for the recently reported addition to Roland Park Methodist Episcopal Church. The new building will be of stone and brick, with steam heat, electric lights, plate and stained-glass windows, 60x70 feet, etc.; cost will be \$30,000.

Baltimore, Md.—Warehouse.—It is understood that the Pennsylvania Railroad Co. will erect a storage house for lumber at the Mt. Vernon shops, stone and frame, 50x150 feet, to cost \$7000.

Baltimore, Md.—Church.—David Utz, 726 Cleveland street, has closed contract to erect one-story church for German Baptist Brethren at a cost of \$8000.

Bamberg, S. C.—School.—Sealed bids for erecting school building will be received until September 12. Plans and specifications furnished on application. A certified check for \$250 must be deposited by each bidder, which will be returned after contract has been signed and bond furnished; C. R. Brobbam, chairman, and C. B. Free, secretary.

Batesville, Ark.—Office Building.—Barnett Bros. Mercantile Co. will erect office and store building two stories high, brick and stone, 108x150 feet. Herbert Chivers of St. Louis, Mo., architect in charge.

Berkley, Va.—Church.—St. Thomas Episcopal Church will build a \$15,000 structure 100x70 feet, seating capacity of 450. A. H. Ellwood & Sons of Indianapolis, Ind., prepared the plans.

Bowling Green, Ky.—Sanitarium.—H. P. and F. D. Cartwright have let contract for erection of sanitarium to cost \$15,000.

Charlotte, N. C.—Dwelling.—C. Baker will erect residence after plans by Frank P. Milburn of Columbia, S. C.

Clarksburg, W. Va.—Bank Building.—Chartered: Empire Building Co., to construct a banking and office building; capital \$150,000; incorporators, S. C. Denham, V. L. Highlands, J. Moore, P. C. Williams and others.

Clarksdale, Miss.—Depot.—Yazoo & Mississippi Valley Railroad will build a depot to cost about \$7000; R. S. Betts, supervisor at Clarksdale.

Clemson College, S. C.—College Building.—Drawings and specifications for the agricultural building at Clemson College, recently reported, can be seen at office of Edwards & Walter, architects, Columbia, S. C., on and after 25th inst. Contract will be let promptly; appropriation \$40,000; Senator B. R. Tillman, chairman committee.

Cockeysville, Md.—Bank Building.—Cockeysville National Bank has awarded contract for erection of new bank building to Jacob L. Fowble. Indiana limestone and red brick will be used; finishings of oak and marble; frontage thirty feet and depth forty-eight feet.

Columbia, S. C.—Reports state that J. G. Garfunkel and associates will build a hotel.

Columbia, S. C.—Hotel.—It is rumored that C. W. McCreery will build a hotel.

Covington, Va.—Opera-house.—R. F. Bopes and associates will build opera-house to cost \$30,000, and J. R. Pirkey is the contractor. Frye & Chesterman of Lynchburg, Va., are the architects.\*

Crofton, Ky.—Bank Building.—A. B. Croft and associates will build bank building.

Dallas, Texas—Church.—First Methodist Church will erect an edifice to cost from \$100,000 to \$125,000. Rev. John M. Moore is pastor.

Dallas, Texas—Business Building.—E. M. Burgher will remodel and improve business building at a cost of \$6000.

Dallas, Texas—Hall.—Garrett's Military Institute has obtained permit for the erection of study hall to cost \$7000. Address care of Commercial Club.

Dawson, Ga.—School.—The city has voted \$30,000 bonds for erection of school building. Address The Mayor.

Dillon, S. C.—Dwelling.—Frank P. Milburn of Columbia, S. C., has prepared plans and specifications for residence to be built by A. J. C. Cottingham.

Durham, N. C.—Depot.—The railroad commission has instructed the N. & W., Southern and Seaboard Air Line railways to erect a new union station, and some changes will be made in the plans prepared by Frank P. Milburn of Columbia, S. C., as suggested by the railroad companies.

Farmington, Mo.—Hospital.—Sealed proposals will be received up to August 31 for erection of west wing, heating and ventilation, plumbing and sewerage in and concrete conduits; also installation of refrigeration and ice-making plant. All contracts will be let separately. Plans and specifications on file at office of steward of State Hospital, Farmington, and at office of H. H. Hohenchild, architect, Rolla, Mo., from whom additional copies may be obtained; C. M. Wiltmer and M. P. Cayce, building committee.

Fayetteville, Ark.—Bank Building.—Washington County Banking & Trust Co. has ordered plans and specifications for three-story building 30x100 feet; W. E. Foley, Springfield, Mo., architect in charge.

Greensboro, N. C.—Hotel.—E. D. Steele of High Point, N. C., will double capacity of hotel, also install electric-light and other improvements at Round Knob.

Greenwood, Miss.—Church.—Gardner & McClurg are architects for the erection of the church reported last week. They have completed plans and specifications, and bids are now being received on brick structure with stone trimmings, slate roof, etc.

Govanstown, Md.—M. E. Church will build a \$10,000 structure 94x140 feet, seating capacity of 300, steam heat, electric lights, etc. Walter U. Causey has prepared plans and specifications.

Hagerstown, Md.—Elks' Hall.—G. B. McC. Wolf has been awarded the contract to build the new Elks' hall at \$14,500.

Hickory, N. C.—Jail.—City will vote October 12 on issuance of \$12,000 bonds for erecting city jail. Address The Mayor.

Hillsboro, Texas—School Building.—The city will erect school building, for which \$8500 has been appropriated. Address The Mayor.

Hot Springs, Ark.—Business Building.—Samuel Blumenstiel will erect three-story steel fireproof building to cost \$25,000.

Kemper, S. C.—Warehouse.—Kemper Tobacco Warehouse, reported incorporated last week, will erect structure 60x150 feet, and Joe Murry Lax, Barnesville, N. C., is architect in charge.

Kingstree, S. C.—A school building to cost \$7000 is to be erected. Address Trustees of Kingstree School District.

Knoxville, Tenn.—Depot.—Plans have been completed for Knoxville, La Follette & Jellico Railroad's proposed freight depot 60x160 feet, two and a-half stories high. R. Montfort, chief engineer Louisville & Nashville Railway, Louisville, Ky., is reported to be asking for bids.

Liberty City (P. O. at Johnston Station), Ga.—Business Building.—C. J. McDonald has let contract to H. J. Morris of Live Oak, Fla., for erection of two-story brick building 60x100 feet.

Lynchburg, Va.—Residence.—M. H. Dingee will build residence to cost \$12,000, and W. B. Snead & Co. are the contractors. Frye & Chesterman are the architects.

Macon, Ga.—Warehouse.—A. V. Small Co. will build warehouse to cost \$30,000.

Marshall, Texas.—School Building.—The city will expend \$30,000 to erect and equip school building. Address The Mayor.

Martinsville, Va.—Postoffice Building.—Sealed proposals will be received until September 22 for the construction (including heating apparatus and electric wiring and conduits) of the United States postoffice at Martinsville, Va., in accordance with drawings and specification, copies of which may be had at office of postmaster at Martinsville, or office of James Knox Taylor, supervising architect, Washington, D. C.

Nashville, Tenn.—Hotel.—It is reported that James Turney and W. T. Ready will build a hotel.

New Orleans, La.—Mill Building.—Lane Mills has let contract to D. J. Glover for erecting additional building to cost \$75,000; structure to be two stories high, 130x300 feet.

Newport, Ark.—Hotel.—J. H. McKew will build a hotel.

Oklahoma City, O. T.—Office Building.—D. Turbyfill has completed plans and specifications for construction of office building, six stories and basement, 50x140 feet, steam heat, electric-lighting plant, fireproof construction, etc.

Opelousas, La.—Church.—E. Toussaint of Alexandria, La., has received contract to build \$25,000 church at Opelousas.

Paragould, Ark.—College Building.—Paragould College Co. will erect college building two stories high, 40x60 feet, to cost \$7000. Mr. Harker is to be the architect.

Pickens, S. C.—School.—V. E. Granby has contract at \$150 for construction of the school building lately decided on; to be two stories high, 84x70 feet. Avery Carter, Spartanburg, S. C., prepared the plans.

Pine Bluff, Ark.—Street Improvements.—The city has awarded contracts to Zeb Ward, Little Rock, Ark., at \$600 for 548,000 vitrified paving brick for street improvements.

Point Pleasant, W. Va.—Hotel.—Wm. Clinger of Huntington, W. Va., has received contract to build the Phoenix Hotel at Point Pleasant; structure to be five stories high.

Raleigh, N. C.—Temple, etc.—A. F. and A. M. expects to complete arrangements in the near future ensuring the erection of the proposed \$100,000 temple, seven stories high, of steel construction; will also build a temporary auditorium. John C. Drewry, manager of Masonic Fair, can be addressed.\*

Rome, Ga.—Depot.—It is reported that the Southern Railway Co. has let contract for construction of depot to cost \$25,000.

Salisbury, Md.—Bank Building.—Thomas Slemmons has contract to erect bank building for Farmers and Merchants' Bank. The building will be one story high, 25x60 feet, constructed of light brick and terra-cotta, interior finished in hardwood, with marble flooring and ornamental ceiling; cost \$15,000. Jackson C. Gott of Baltimore is the architect.

San Antonio, Texas—Hotel.—Gus Franks has leased building, which he will remodel and improve for hotel purposes.

Southport, N. C.—Jail.—Sealed proposals will be received by commissioners of Brunswick county until September 28 for the construction of a county jail with steel cells. Plans and specifications by T. T. Allard have been accepted, and may be obtained from Clerk of Commissioners, or may be seen at his office.

St. Louis, Mo.—Fair Building.—Proposals are invited for construction of Montana State building on World's Fair grounds. Plans and specifications can be seen at office of J. G. Link, architect, Silver Bow Block, Butte, Mont., and at office of J. N. Maybury, administration buildings, exposition grounds, St. Louis. Bids must be mailed to Paul McCormick, secretary, Montana World's Fair Commission, Billings, Mont., and be received not later than 12 o'clock noon, September 10. Bids will be opened September 11 at office of Lee Mantle, Butte.

Texarkana, Ark.—Clubhouse.—The Country Club, capitalized at \$10,000, will erect a clubhouse. Address care of E. K. Smith, director.

Towson, Md.—Guild Hall.—Architects Worthington & Ahrens of Baltimore have drawn plans for guild hall for Trinity Protestant Episcopal Church. It will be two stories high, 48x36 feet; equipment of steam heat, electric lights, baths, toilets, billiard room and practicable stage. The cost will be \$15,000.

Tuskegee, Ala.—Hotel, etc.—Charles W. Thompson will expend about \$15,000 to build the store and hotel building reported last week, size to be 150x200 feet. The architect has not been engaged.\*

Umatilla, Fla.—Hotel.—Robert L. Collins and associates will form company to build \$5000 hotel.

Waco, Texas—Warehouse.—Waco Electrical Supply & Plumbing Co. has already received bids on the construction of its proposed warehouse. Building will be 65x100 feet. Ole J. Lorehn, Houston, Texas, has charge of the construction.

Washington, D. C.—Apartment-house.—Mrs. L. C. Plant will build an apartment-house of twenty-five suites to cost \$100,000, and Appleton P. Clarke is preparing the plans and specifications.

Washington, D. C.—Bank Building.—International Banking Corporation has leased West End Bank building, and plan extensive alterations, including new vaults, iron grille work, gas and electric plant, and steam heat.

West Palm Beach, Fla.—Business Block.—O. B. Cory will erect brick business block to replace structures burned recently.



Wheeling, W. Va.—Department Store.—J. L. Hawley will build department store ten stories high, 38x140 feet, of stone and concrete, etc., to cost about \$75,000. Joseph Leiner will prepare the plans and specifications.

Wheeling, W. Va.—Bank Building.—It is reported that Joseph Leiner, architect, is preparing plans and specifications for a \$400,000 bank building to be erected by a new banking company.

Wheeling, W. Va.—Factory Building.—Charles D. McCarthy, architect for Bloch Bros., has let contract to M. C. Hamilton & Son for excavations, concrete, stone and brick work for the Bloch factory building, recently reported; structure to be eight stories high, 100x150 feet. The Hamilton contract amounts to about \$20,000.

Wheeling, W. Va.—Church.—East End Methodist Church has awarded contract to W. H. Datson at about \$6500 for erecting proposed edifice.

## RAILROAD CONSTRUCTION.

### Railways.

Baltimore, Md.—The Baltimore & Ohio Railroad Co. is reported to be making plans for much additional track room at Grafton, W. Va. J. M. Graham is chief engineer at Baltimore.

Baltimore, Md.—The report that the Baltimore & Ohio Railroad is planning to extend its yard facilities at Grafton, W. Va., is officially denied.

Birmingham, Ala.—The Birmingham Southern Railroad will, it is reported, build a belt line around Ensley. P. S. Milner is chief engineer.

Bristol, Tenn.—The Virginia & Southwestern Railway will, it is reported, build a line between Elizabethton and Okolona, three miles from Johnson City. J. B. Newton is vice-president and general manager at Bristol.

Cape Girardeau, Mo.—James F. Brooks writes the Manufacturers' Record that the line for the Boston Mountain Railway is now located, and rights of way are being obtained. The road is to build a standard-gauge line from the White river up Buffalo river to a point near St. Joseph, Mo., fifty miles. Its starting point will be Buffalo City.

Charlotte, Tenn.—Mr. J. R. Neblett, civil engineer, and also county surveyor for Dickson county, writes the Manufacturers' Record: "Papers have been gotten out by Chicago capitalists for a charter for a railroad from the mouth of Harpeth, on the Cumberland river, thirty miles below Nashville, Tenn., via Charlotte and Pond, Tenn., to Corinth, Miss., to be known as the Tennessee Industrial Railroad. I am at present making a survey from the mouth of Harpeth to Pond, a distance of twenty-six miles."

Chicago, Ill.—It is reported that construction of the Choctaw, Oklahoma & Gulf extension (Rock Island system) from Amarillo, Texas, to Tucumcari, N. M., will be resumed immediately. John F. Stevens is chief engineer at Chicago.

Cincinnati, Ohio.—C. C. Tennis of Cincinnati is quoted as saying that the River Road Company, which is to build an electric line out of Louisville, Ky., may be in operation within sixty days. Some new rails have been laid, and the trolley wires have to be strung. He is also interested in the Mt. Washington line, which is expected to be in operation by January.

Cincinnati, Ohio.—C. W. Cole, one of the incorporators, writes the Manufacturers' Record that the Burnside & Cincinnati Railway Co. of Kentucky is a reorganization of the Burnside & Cumberland River Railway.

Cincinnati, Ohio.—The Municipal Bond & Securities Co. of Cincinnati will, it is reported, make application at Versailles, Ky., for rights of way for an electric railroad along the Versailles and McCracken's Mill turnpike, for a line from Frankfort to Versailles. The company, it is further stated, recently purchased the Frankfort Street Railway. Mr. J. F. Mosby, secretary and treasurer of the Municipal Bond & Securities Co., writes the Manufacturers' Record: "Our company is expecting to finance a deal comprising the Frankfort & Suburban Railway Co. of Frankfort, Ky., and a proposed interurban line from Frankfort to Versailles, Ky. The Frankfort & Suburban Railway Co. has seven and one-half miles of track now laid. There will be added to this two and one-half miles. The line between Frankfort and Versailles will be about twelve miles in length. Operation on the Frankfort City lines and the construction of extension to Versailles will begin in the near future. No engineer has been appointed as yet."

Clarksville, Tenn.—Chicago capitalists reported planning to build an electric railway from Pond, the junction of the Nashville,

Chattanooga & St. Louis Railroad, and the Clarksville Mineral Railway, to a point near the mouth of the Harpeth, on the Cumberland river.

Coalgate, I. T.—Reported that construction will begin immediately on the proposed electric railway from Coalgate to Lehigh.

Danville, Va.—The Danville & Western has finished converting its road to standard gauge to Stuart.

Eureka Springs, Ark.—Reported that the St. Louis & North Arkansas Railroad has awarded a contract for an extension from Marshall, in Searey county, to Qultman, Cleburne county, forty-five miles. George L. Sands is vice-president.

Fort Smith, Ark.—The Central Construction Co., with headquarters at Fort Smith, has been incorporated to do railroad and other work in Oklahoma, Indian Territory and Arkansas, and also has an office at Shawnee, O. T. W. R. Abbott is president. He is also vice-president of the Central of Arkansas Railroad (which will be built by the company), and president of the American National Bank. The other incorporators are J. W. McLeod of Little Rock, Ark., and Willard Johnson of Shawnee, O. T. In addition to these, the board of directors includes F. A. Molitor of Fort Smith, J. M. Spradling of Greenwood, C. M. Cade of Shawnee and R. H. Drennan of Oklahoma City.

Grafton, W. Va.—The Grafton Street Railway Co. is making a preliminary survey, and Joseph P. Horstman of Cincinnati, engineer in charge, is preparing plans and specifications. No contracts yet awarded. There will be about seven miles of line built this year. The foregoing information is furnished the Manufacturers' Record by Benjamin F. Bailey, a director of the company.

Grafton, W. Va.—It is reported that track will be laid on the Buckhannon & Northern Railroad (the Wabash connection) from Grafton to Monticello before winter begins.

Guthrie, O. T.—The Osage Railroad Co. has been incorporated to build from the Missouri, Kansas & Oklahoma Railroad, in the Osage Nation, northeast to the Indian Meridian. It is in the M., K. & T. system.

Henderson, Ky.—I. A. Stewart has completed a survey for an electric railway from Henderson to Curdsville.

Hillsboro, Texas.—The Trinity & Brazos Valley Railway is reported to have completed tracklaying as far as Hubbard.

Houston, Texas.—Capt. Joseph Owens has, it is reported, been awarded a contract to build a line for the Beaumont, Kansas City & Gulf Railroad from Weed to San Augustine, thirty-five miles.

Ivydale, W. Va.—The Charleston, Clendenin & Sutton Railroad has graded from Ivydale to Frametown on its extension, and has shipped rails along the line, tracklaying to begin soon. Graders are within six miles of Sutton, and the road, it is stated, will be completed as far as Little Otter this season.

Jennings, La.—The Commercial League is reported to have secured subscriptions sufficient for building a steam dummy road to the oil fields.

Kansas City, Mo.—Mr. Milnor P. Paret, chief engineer Kansas City, Mexico & Orient Railway, informs the Manufacturers' Record concerning reported branches in Mexico, that a reconnaissance has been made for a branch to extend fifty or sixty miles west from Minaca or a point near there towards the Jesus Maria mines. No surveys will be made for some time.

Lufkin, Texas.—Mr. P. A. McCarthy, consulting engineer, writes the Manufacturers' Record that next week he will begin the location and will afterwards take charge of construction of twenty-eight miles of standard steam road for Groveton capitalists.

Lufkin, Texas.—Mr. P. A. McCarthy, consulting engineer, informs the Manufacturers' Record that he has just completed location of a 13.2-mile extension for Texas Short Line Railway between Grand Saline and Canton. Profile and estimates will be ready in a few days. There will be fifteen pile trestles and overhead bridge crossing the Texas & Pacific Railway, maximum grade 1 per cent. Construction will begin early next year.

Maryville, Mo.—The Maryville & St. Joseph Electric Railway Co. of Maryville, Mo., has been chartered to build a line seventy miles long from Parnell to St. Joseph, running through Nodaway, Andrew and Buchanan counties. The incorporators are Richard Kuchs, Richard M. Bradbury, Stephen H. Kemp, Clarence E. Bartlette, Adolph Lippman, Charles E. Gosnell and John W. Thompson, all of Maryville.

Memphis, Tenn.—C. D. Smith & Co., general contractors, write the Manufacturers' Record that they have five different jobs on hand. They are just beginning a large terminal yard at Corbin, Ky., for the Louisville & Nashville to have twenty-five parallel tracks about one mile long. They also have thirty miles of double-track work at Dyersburg, Tenn., on the Illinois Central main line. They are also just starting a contract for twelve miles from Yarbrough to Swan Lake, Miss., for the Yazoo & Mississippi Valley Railroad (Illinois Central system). Furthermore, the firm has 100 miles of construction under way for the Mobile, Jackson & Kansas City Railroad from Beaumont, Miss., to Newton, Miss., with a branch to Ellisville,

Miss. Rails are being laid on the first forty miles. Lastly, the firm has just closed a contract for 150 miles more on the same line from Newton to Pontotoc, Miss., construction to begin at once. This work is now being let, all the profiles and data having just been received.

Natchitoches, La.—G. E. Montgomery, general manager of the Southern Land & Immigration Co., writes the Manufacturers' Record that it contemplates the building of thirty miles of railroad, and desires to get in touch with persons who can furnish information concerning the construction of steam and electric railways and their relative merits; also as to the possibility of using both steam and electric power on the same road.

New Iberia, La.—Gen. F. F. Myles is reported to be preparing to build the New Iberia Electric Railway, which is to connect New Iberia with Morgan City and intermediate points.

Ocella, Ga.—The Ocella & Valdosta Railway Co. gives notice of application for a charter. It proposes to build from Ocella to Valdosta, eighty miles, with an extension from Ocella to Helena to connect with the Southern. The incorporators are J. A. J. Henderson, J. H. Powell, J. W. Paulk, Reason Henderson, M. J. Paulk, Wm. Henderson, J. L. Paulk, M. Henderson, J. C. Luke, R. V. Paulk, D. H. Paulk and J. J. Walker.

Pittsburg, Pa.—Concerning the report that the Westinghouse Company is preparing estimates for building an electric railway from Kenova, W. Va., to Charleston, W. Va., with extensions to connect with Columbus, Ohio, the publishing department of the company informs the Manufacturers' Record that within a year a chain of roads will connect Kenova with Columbus, thus: Scioto Valley

Traction Co. of Columbus, Ohio, running to a point twenty miles north of Portsmouth; the Portsmouth Street Railway, connecting with the Scioto Valley line and running to Portsmouth, and thence along the river to Hanging Rock; Camden Interstate Railway, thence from Hanging Rock through Ironton, Ashland and Kenova to Huntington, W. Va.

Port Lavaca, Texas.—The Rice Belt Railway Co. has filed its charter to build a line between Sinton, Texas, and Galveston, 200 miles. It is reported to be a 'Frisco' project. The incorporators are W. G. Peterson, Willett Wilson, Ross L. Clark and L. Seabrook of Port Lavaca, A. E. Masterson of Angleton, Texas, and Jesse French, Matthew P. Murray and August Schaffly of St. Louis.

Portsmouth, Va.—Vice-President and General Manager J. M. Barr of the Seaboard Air Line writes the Manufacturers' Record saying there is no truth in the press dispatches that the Seaboard Air Line has acquired extensive options on additional waterfront property at Portsmouth.

Rusk, Texas.—W. H. Knox is reported to be locating a road from the terminus of the State Penitentiary Line to the Neches river.

Ruston, La.—Mr. John A. Knox, chief engineer, writes the Manufacturers' Record that he is having a location survey made southward from Winnfield, La., with C. H. Sargent as locating engineer.

Rutherfordton, N. C.—R. L. Greenlee is reported to be chief engineer of the surveying party running a line for a railroad from Marion, N. C., via Rutherfordton to Spartanburg, S. C.

Santa Fe, N. M.—It is reported that the Santa Fe Central Railway will build an extension about 300 miles long from Torrence, N. M., to Big Springs, Texas, to connect with the Texas & Pacific Railroad. A. G. Kennedy is chief engineer at Santa Fe.

Shawnee, O. T.—The Pan-American Railroad Co., capital \$250,000,000, has been chartered at Guthrie to build a line from Port Nelson, on Hudson bay, to Winnipeg, Manitoba; thence through the Dakotas, Nebraska, Kansas, Indian Territory, Oklahoma and Texas to Galveston; thence through Mexico to Central America, and so on to South America, the main line running from a point in Peru to Buenos Ayres, with a branch to Valparaiso, Chile. The directors are William H. Dodge, Stephen A. Sheldon, W. E. Pendleton, Elbridge G. Phelps of Shawnee, O. T., and Charles E. Wells of Lincoln, Neb.

Shreveport, La.—The Louisiana, Texas & Northern Railroad has been organized and will apply for a charter. The officers are J. A. Hill, president of the Central Company of South McAlester, president; J. J. Bell of Kansas City, secretary, and N. L. Hull of St. Louis, treasurer. The company proposes to build from Shreveport to South McAlester, 250 miles, crossing coal and iron fields in Eastern Texas and the Indian Territory. Ultimately it is proposed to build to the Gulf. Mr. Bell is reported as now engaged in building the Kansas City & Duluth line.

St. Louis, Mo.—Henry Miller, general superintendent of the Hannibal & St. Joseph Railroad, is reported to be arranging for the immediate construction of new yards at Kansas City with 3500 cars capacity. Mr. Miller writes the Manufacturers' Record that plans have been made for a yard, but says that it is rather doubtful as to whether work will begin this year.

Terrell, Texas.—The Texas Midland Railroad is building spur tracks at Terrell and Parvin Park.

Topeka, Kan.—C. A. Morse, acting chief engineer Atchison, Topeka & Santa Fe Railway, writes the Manufacturers' Record: "There is nothing in the report of any immediate building from Owasso to Honey Grove, Texas. We are building a five-mile connection between Havana and Caney, which connects our line from Caney to Owasso with our other lines at Havana. We have heretofore been using a part of the Missouri Pacific line to get onto our Caney-Owasso line."

Tusculum, Ala.—W. H. Gilliam, civil engineer, has received an inquiry from the North Alabama Electrical Railway Co. of New York concerning a preliminary survey to be made for it from Sheffield, Ala., to Birmingham.

Tyler, Texas.—The St. Louis Southwestern Railway will, it is reported, build a new terminal and side-tracks at Rusk, Texas. M. L. Lynch is chief engineer at Tyler.

Union Springs, Ala.—The Union Springs & Northern Railroad will, it is reported, begin survey immediately for an extension from Fort Davis, on the Seaboard Air Line, to Rockford and Birmingham. W. M. Blount is president.

Versailles, Mo.—J. H. Roberts of Versailles

**THE PROPOSAL COLUMNS** of the Manufacturers' Record are invaluable in securing competitive bids from first-class firms for bond purchases and all kinds of construction work, as railroad (steam and electric), electric light plants, public franchises, waterworks, sewerage, municipal improvements and all public utilities; and whenever the regular issue of the Manufacturers' Record is too late for quick bids, the Daily Bulletin of the Manufacturers' Record, which reaches financial people, engineers, architects, contractors, etc., throughout the country—North, South, East and West—can be used to great advantage, as it is published every business day in the year.

has, it is reported, been given the contract for tracklaying on the Rock Island line from Versailles to Kansas City.

Washington, D. C.—The Southern Railway, it is reported, will extend its Coal Valley Railroad in Alabama to new mines of the Corona Coal & Iron Co. W. H. Wells is engineer of construction.

Washington, D. C.—The Northern Alabama Railroad (Southern Railway system) will, it is reported, build a spur one and one-half miles long from the Cane Creek branch, in Jefferson county, Alabama, to the Pratt Coal Co.'s mines. W. H. Wells is engineer of construction at Washington.

Washington, D. C.—The report that the Southern Railway will build a line from Oliver Springs to Pilot Mountain, Tenn., is officially denied.

Washington, D. C.—The permit for the Pennsylvania Railroad Co.'s tunnel under Capitol Hill provides that the tunnel line shall branch off the present road at or near the crossing of Second street southwest; thence northeast across the blocks diagonally to the corner of New Jersey avenue and D street southeast, where it will enter the tunnel; thence on a curving line through the tunnel to the intersection of First and B streets southeast, and so on northward through the tunnel under the west side of First street east to E street north, and thence to a connection with the Union Station at Delaware and Massachusetts avenues, close by.

#### Street Railways.

Apalachicola, Fla.—The Apalachicola Street Railway Co. has been granted a franchise by the city council to build a street railway on Market, Live Oak, St. Vincent's, Pine, Chestnut, Juniper, Franklin, Columbus, Locust and other streets. The incorporators are H. W. Grady, John M. Fowler, Andrew L. Wing and Domingo Cattantelli.

College Hill, Ark.—The College Hill Light & Traction Co. has been chartered, with \$195,000 capital; E. K. Smith, president; J. D. Sanderson, vice-president; E. J. Spencer, secretary; J. L. Chatfield, treasurer, and F. W. Offenhausser, assistant secretary.

Corpus Christi, Texas.—Moling Bros., represented by Edgar Watkins, have been granted franchises for an electric street railway.

Houston, Texas.—John W. Maxey has, it is reported, obtained a franchise at Brownsville, Texas, for a street-car system.

Jacksonville, Fla.—The new line of the North Jacksonville Street Railway Co. to Mason's Park has been opened for business.

Little Rock, Ark.—The Little Rock Railway & Electric Co. has been granted a franchise across the free bridge, and will, it is reported, begin construction immediately.

Memphis, Tenn.—The Memphis Street Railway Co. has extended the Union & Spring Streets line to the Raleigh Avenue line, and is also making other extensions and improvements. Frank G. Jones is general manager.

Pensacola, Fla.—The Electric Terminal Co. has applied for a new franchise to extend and improve its system.

St. Louis, Mo.—Mr. Fletcher R. Harris, vice-president of the McNair, Harris & Jones Realty Co., Eighth and Locust streets, writes the Manufacturers' Record confirming the report that the City Street Railway Co. has applied for a franchise over certain streets in Memphis, Tenn.

St. Louis, Mo.—The St. Louis & Olivette Railroad Co. has been incorporated to succeed the West End Railroad Co. The incorporators are W. Carl Feld, S. S. Senne, E. H. Daves, A. H. Werremeyer and W. E. Hoopes. The company has been granted a franchise.

Winston Salem, N. C.—F. C. Brown, Joseph Jacobs and J. C. Bessent are reported to have charge, as a committee, of the question of extending the street railway to East Winston.

Recent York Contracts.—There continues to be a steady demand for the ice-making and refrigerating machinery manufactured by the York Manufacturing Co., York, Pa. The company's most recent contracts include a 15-ton plant for Standard Chemical Oil Co., Troy, Ala.; two 225-ton refrigerating machines, compound condensing engine, for Carnegie Steel Co., Astoria, Pa.; 65-ton refrigerating and 20-ton ice plant at McComb City, Miss.; 100-ton ammonia condenser for consumers' ice Co., Covington, Ky.; 10-ton distilling system for Cyclops Iron Works, San Francisco; 40-ton refrigerating and 20-ton ice plant for Leland (Miss.) Ice & Cold Storage Co., and a cold-storage plant to be used in connection with wine-making by Renault & Sons of Egg Harbor, N. J., their order including a 10-ton refrigerating machine and piping for brine circulation.

#### Machinery, Proposals and Supplies Wanted.

**Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.**

Agricultural Implements.—See "Disc Drill."

Bakery Equipment.—Hargrave Blenit Co., 443 North street, Baltimore Md., will want prices on equipment for cake and cracker bakery.

Bed (Iron) Machinery.—See "Ironworking Machinery."

Beverage-manufacturing Equipment.—See "Bottling Equipment."

Bicycles, etc.—Salvador Torras, Calle Regomir, 4bis, tienda, Barcelona, Spain, wants to obtain agencies for manufacturers of bicycles, motor cycles, automobiles and accessories of all kinds.

Blower System.—Central Manufacturing Co., Roanoke, Va., is in the market for complete set of metal conveyors and blower system for handling shavings.

Boats.—C. J. Sheiverton, Austell, Ga., will buy a gasoline launch for shallow water.

Boiler.—D. F. Hill & Co., Manufacturers' Record Building, Baltimore, Md., are in the market for a 25 to 30-horse-power locomotive boiler, second-hand, in good order.

Bottling Equipment.—Magnolia Ice Manufacturing Co., Magnolia, Miss., is in the market for bottling equipment and pop-making machines.

Bottling Equipment.—O. T. Roberts, Eufrasia, Ala., wants to correspond with manufacturers of machinery for manufacturing soda water and for bottling it; also with makers of bottles and cases.

Box Machinery.—C. A. Tappan, Biloxi, Miss., is in the market for boxmaking machinery operated by electricity and machine power.

Building Equipment.—See "Pumping Engines, etc."

Building Equipment.—Charles W. Thompson, Tuskegee, Ala., will want prices on building materials and modern equipment of all kinds (for hotel and store buildings to cost \$15,000).

Building Equipment.—Spurlock-Neal Company, Nashville, Tenn., will want two electric elevators, sprinkling apparatus, furnace and fixtures for steam heat.

Building Materials.—John C. Drewry, treasurer of Masonic Fair, Raleigh, N. C., wants addresses of manufacturers of materials for erecting a temporary auditorium.

Building Materials.—West Virginia Architects & Builders Co., Clarksburg, W. Va., wants prices on all kinds of building materials.

Canning Machinery.—J. E. Adger, Pelzer, S. C., wants to buy canning machinery.

Canning Machinery.—Scurry Preserving Co., Scurry, Texas, is in the market for canning, pickling and preserving machinery, spiral and chain conveyors, etc.

Cardboard Machinery.—Yerex & Jones Company, Wellington, New Zealand, wants to communicate with manufacturers of cardboard suitable for card index supplies; also with manufacturers of machinery for cutting and perforating same.

Conveyor System.—See "Blower System."

Disc Drill.—W. H. Clark, Stuart, Va., wants a good disc drill from which the drill can be detached, leaving the disc for a harrow.

Dredge.—United States engineer office, Witherspoon Building, Philadelphia, Pa., wants sealed proposals for constructing wooden single screw suction dredge for Key West harbor, Florida, until September 21. Information furnished on application; J. C. Sanford, captain, engineers.

Electric-light Plant.—Proposals will be received until September 1 for the construction of the water-works and electric-light plant at Louisville, Ga. Machinery required includes 60-kilowatt alternator, 90-horse-power automatic engine, 6 arc lamps, 21 100-candle-power incandescent lamps, 25 tons of 4, 6 and 8-inch pipe, 27 fire hydrants, 40,000-gallon tank, two 500,000-gallon pumps, etc. Plans and specifications on file with clerk of council, Louisville, and with Moore & McCrary, engineers in charge, Atlanta, Ga.

Electric-light Plant.—Standard Turpentine Co., 96 Fifth avenue, New York, wants bids on 50-horse-power stationary engines, 100-horse-power boiler and dynamo to furnish twenty lights.

Electric-light Plant.—Y. M. C. A., Jesse Blanton, secretary, Roanoke, Va., contemplates buying a small dynamo.

Electrical Equipment.—Biloxi Electric Light Co., Biloxi, Miss., wants prices and descriptions on sadirons, cooking utensils, heating appliances, etc., operated by electricity.

Elevators.—See "Building Equipment."

Fencing.—James A. Dezell, Mt. Pleasant, Fla., wants net figures on iron fencing suitable for a country cemetery.

Fire Protection.—See "Building Equipment."

Fire-protection Supplies.—W. W. Bierce, Ltd., Hennen Building, New Orleans, La., wants addresses of manufacturers of galvanized fire buckets.

Furniture.—See "School Fixtures."

Furniture Manufacturers.—A. P. Crockett, Hopkinsville, Ky., wants to correspond with manufacturers of furniture, especially of folding beds.

Gasoline Launch.—See "Boats."

Glass Manufacturers.—Ford-Imboden Company, Leewood, W. Va., or Box 263, Charleston, W. Va., wants to correspond with glass manufacturers.

Grinding Stones.—Baker, Stillwell & Hart, 421 Chalfoux Building, Birmingham, Ala., are in the market for six pairs of 42-inch burr stones for grinding mineral paint.

Heating.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., invites proposals until 2d of September for furnishing the steam-heating apparatus complete in place for the United States courthouse and postoffice building at Jackson, Miss., in accordance with drawings and specification, copies of which may be had at this office, or office of custodian at Jackson, Miss.

Heating Plant.—See "Building Equipment."

Heating and Plumbing, etc.—See Building Notes column under Farmington, Mo.

Ice Machinery.—Thomas Ashen, West Louisville, Ky., will be in the market for ice plant.

Ice Plant.—J. F. Hedick, Brooksville, Fla., wants to correspond with builders of ice plants.

Ice Plant.—See Building Notes column under Farmington, Mo.

Ironworking Machinery.—F. A. Thole, 339 Arcade Building, Seattle, Wash., wants information regarding machinery for manufacturing brass and iron beds.

Lock and Dam.—United States engineer office, Cincinnati, Ohio.—Sealed proposals for furnishing all material and labor for constructing lock and dam No. 11, Kentucky river, near College Hill, Madison county, Kentucky, will be received until September 19. Information furnished on application; Lieutenant-Colonel Ernest H. Ruffner, engineer.

Lumber.—American Mahogany Co., West and Eagle streets, Brooklyn, N. Y., is ready to negotiate for large quantities of native hardwoods.

Machine Plant.—Kentucky Gear & Machine Co., Gottlieb Binder, engineer, Louisville, Ky., wants prices on machine-plant equipment—boilers, engines, metal working machinery, etc.

Machinery Construction.—Southern Land & Immigration Co., G. E. Montgomery, general manager, Natchitoches, La., wants estimates on construction of thirty miles of railroad. Expert information is requested as to the use of electric power and steam power; also as to equipment for either steam or electric power, the railway to be suitable for both passenger and heavy freight traffic.

Mill Equipment.—Ladshaw & Ladshaw, engineers for the Rhode Island Co., Spray, N. C., are interested in purchasing fire-protection equipment, heating outfit, supported steel tank of 15,000 gallons capacity and pump for 80-foot lift.

Mining Equipment.—S. S. Ross, Gaffney, S. C., is in the market for complete equipment for a placer mine, namely, pump, boiler, piping and concentrators, for tin ore.

Mining Plant.—Ohio Valley Mining Co., Marion, Ky., wants estimates on whips, drills, hoisting engines, zinc smelter and plant for milling and separating zinc and lead.

Oil Filters.—Wallach Bros., 57 Gracechurch street, London, E. C., England, want ad-

resses of manufacturers of oil filters of capacity from 150 to 300 gallons per day.

Paint Grinders.—See "Grinding Stones."

Paving Blocks (Wooden).—J. L. Bradshaw Company, Burkeville, Va., wants to correspond with users of wooden paving blocks.

Piping.—See "Water-works Supplies."

Piping.—John R. Kirksey, Kirksey, N. C., wants 500 feet of 6, 8 and 10-inch spiral riveted piping, flanged with gaskets, reducers, elbows, bolts, hose and all fittings necessary to make complete line for hydraulic mining; second-hand preferred.

Piping, Plumbing, etc.—See "Pumping Engines, etc."

Power Equipment.—See "Box Machinery."

Pump.—See "Mill Equipment."

Pumping Engine, etc.—H. Devereux, Lawrence, Ark., wants prices on pumping engine, iron piping, wire fencing, ribbed window glass, roofing, corrugated iron, urinals, water-closets, chairs for grandstand, tanks, asphalt paint, etc.

Railway Equipment.—Glendon Mining & Manufacturing Co., 120 W. Fourth street, Winston, N. C., wants prices on 3000 feet of 35-pound steel rails, three frogs, three switch stands, three complete sets switch points and 3200 three-inch railroad spikes; delivery at Glendon, N. C.

Railway Supplies.—Montlake Coal Co., Chattanooga, Tenn., wants to purchase at once 5000 lineal feet of 25-pound steel relaying rails with splices.

Road Machinery.—A. R. Stewart, Nashville, Tenn., is in the market for steam roller twelve to fifteen tons, for delivery at Columbia, S. C.; first class second-hand machinery will answer.

Saw-mills.—Rucker Bros., permanent address to be Itabena, Miss., wants two heavy portable circular saw-mills of 25,000 or 35,000 capacity each. For next thirty days correspondence to be addressed to W. H. Rucker, Lawrenceburg, Ind.

School Fixtures.—G. W. & C. M. Wall, Wallburg, N. C., are in the market for school desks and fixtures.

Seating.—R. F. Bopes, president Citizens' National Bank, Covington, Va., wants catalogues of seating for opera-house; also buy scenery and stage equipment.

Theater Staging, etc.—See "Seating."

Tin Strips.—"Tin Strips," Box 901, Richmond, Va., is in the market for a carload of tin strips, sizes 9 1/2, 9 and 7 1/2; lengths about 20 inches.

Tunnel Work.—Bids will be opened September 19 for driving drainage tunnel through coal property of Consolidation Coal Co.; tunnel to be about 11,000 feet long, 7x8 feet. Maps, profiles and specifications on file at company's office, Frostburg, Md. B. S. Randolph, mining superintendent, will open the bids.

Watchman's Clocks.—Wm. W. Bierce, Ltd., Hennen Building, New Orleans, La., wants addresses of manufacturers of watchmen's recording clocks.

Water-works.—Bids will be opened September 7 for the construction of water-works at Jefferson, Texas. Pumping station, steam or gasoline engine, 1000 feet of six-inch stand and iron pipe, standpipe, etc., will be needed. J. H. Rowell, Sr., is mayor.

Water-works.—City of Davis, I. T., will soon ask for propositions on water-works franchise. Address The Mayor.

Water-works Supplies.—City of Paris, Texas, wants prices on seven miles of cast-iron water pipe twelve inches in diameter, with specials for same. State thickness and pressure per square inch. Address T. S. Hill, mayor.

Water-works.—See "Electric-light Plant."

Water-works.—Bids will be opened September 3 for furnishing material and constructing water works at West Point, Va.; materials to include four, six and eight-inch pipe, gasoline engine, pump, water tower, wells, etc. Specifications furnished by City Engineer. Town Clerk will open proposals.

Woodworking Machinery.—See "Box Machinery."

Woodworking Machinery.—T. J. Bentley, Clarksville, Ga., wants catalogues and prices on all kinds of woodworking machinery.

Woodworking Machines.—Piedmont Springs Lumber Co., Morganton, N. C., contemplates buying double surfacer.

Woodworking Machinery.—J. L. Bradshaw Company, Burkeville, Va., is in the market for machines to turn curly comb handles; also wants to correspond with users of wooden paving blocks.



## TRADE NOTES.

**Wants Lamp Salesmen.**—Energetic men with \$25 capital are wanted to sell a new lamp for which there is a ready demand. Further information can be obtained by addressing Pacific Electric Co., 125 Main street, La Crosse, Wis.

**Boiler Plant for Sale.**—A Southern boiler plant is offered for sale. The property is equipped with modern machinery and facilities, and the territory which it can cover offers opportunities for plenty of work. The New Albany National Bank, New Albany, Ind., can be addressed for information.

**Manufacturing Interest for Sale.**—An entire manufacturing plant or half-interest in the enterprise is offered by A. T. Moore, 122 E. Eighth street, Chattanooga, Tenn. A practical man of experience with services can make this a very profitable venture.

**A Woodworking Opportunity.**—An established sash, door and blind factory with complete up-to-date equipment situated in one of the best woodworking sections of the South is being offered for sale. Address Brobston, Fendig & Co., Brunswick, Ga.

**Opportunity for Woodworking Plants.**—The United States patent on a display bench for dog shows is offered for sale. Operators of woodworking plants can readily handle the production of the article. For information address Box F, care Manufacturers' Record.

**Selling a Flour Mill.**—Because the site of a large flour-mill is needed for railroad improvements, it is found necessary to sell the plant. The machinery can be purchased with or without building. A capacity of 150 barrels daily is afforded by the equipment. Address B. R. Lane, Ironton, Ohio.

**For City Electric Plant.**—Contract for building the municipal electric-light plant, both arc and incandescent systems, at Charlaw, S. C., has been awarded to the Standard Electric Co. at Norfolk, Va. This company is to furnish and erect all machinery and material necessary for the complete installation.

**Ordered From Vogt.**—Many of the important contracts for ice machinery to be installed in the South are received by that leading Southern builder of ice machines, the Henry Vogt Machine Co. of Louisville, Ky. This company's most recent order was from Capt. W. D. Pugh for a 40-ton machine for his cold-storage plant at Yazoo City, Miss.

**Advertisement Specialties.**—Modern advertising as exemplified in the best work of the advertising specialists of today makes profitable business. In the preparation of advertisements, of booklets, circulars, prospectuses and other advertising literature, M. H. Green has had extensive experience. Offices at 239 Dearborn street, Chicago.

**Huennekes Company Incorporated.**—Messrs. H. Huennekes & Co. of 1111 Liberty street, New York, have incorporated under the title of the Huennekes Company, with a capital stock of \$500,000. This company will continue the business of introducing the manufacture of "sand and lime" building bricks by the Huennekes system.

**Competent Men Wanted.**—Hugh C. Risdon, P. O. Box 110, Washington, D. C., has two furniture plants in Virginia and three furniture plants and one chair factory in North Carolina needing the services of competent managers who can take a financial interest. Exceptional terms will be made. Northern men of experience preferred. Mr. Risdon will give particulars on request.

**James McLaughlin Resigns.**—Announcement is made that Mr. James McLaughlin, secretary and treasurer of the Barr Pumping Engine Co. of Philadelphia, has resigned his position. Mr. McLaughlin is well known to the trade and to users of pumping engines in the industrial world. Any announcement he may make regarding his future interests in the machinery world will be received with interest.

**Wants Shop Building.**—A manufacturer is seeking in Philadelphia or vicinity a building for machine shop. The structure must have not less than 6000 square feet of ground floor space, ceiling not lower than fourteen feet, and be on or near railroads, with or without power. Owners of building that may be suitable are advised to address R. D., care Manufacturers' Record.

**Louisiana Agricultural Lands.**—Tracts of agricultural land on the Southern Pacific Railroad, fifteen miles from New Orleans, are now on the market. The soil is rich, and

suitable especially for rice, as well as for cotton, corn, sugar and truck. Easy terms can be made, and special inducements will be offered to organizers of planting companies. Address Lloyd Posey, Masonic Temple, New Orleans, for further particulars.

**A Moore Desk Weight.**—The Moore desk weight is a handy little article. It represents a section of steel rail, on which appears the card of Messrs. Edgar M. Moore & Co., and serves to remind users that the firm deals in foundry castings, steel rails and other iron and steel products. Messrs. Moore & Co. are established at Pittsburgh, Pa., and are preparing to extend their trade in the South. They solicit inquiries for estimates.

**Navy Orders the Otis.**—The Navy Department has ordered from the Otis Elevator Co., New York, an electric dumbwaiter with push-button control to be installed on the United States receiving ship Hancock. The car will run from the galley on the lower deck to the messroom on the upper deck, with a third landing at the deck intermediate. The rated capacity of the dumbwaiter will be 250 pounds at seventy-five feet per minute, and the car travel will be thirty feet.

**Hartford Business Increasing.**—A proof that the product sold is of the highest quality and appreciated by those who desire the best is seen in the increasing demand for the Hartford Blower Co.'s specialties. This company finds such a large increase in its business that it is necessary to enlarge the plant fully two-thirds, and this is now being done. The improvements will greatly add to the company's facilities for manufacturing Hartford blowers, exhausters, dust collectors, etc., at the plant in Hartford, Conn.

**The Grangers' Picnic.**—The great grangers' picnic at Williams' Grove, Cumberland county, Pennsylvania, is being held this week. The A. B. Farquhar Co. of York, Pa., is showing an up-to-date Farquhar portable saw-mill outfit, with the "Slickest" log turner; also one of its latest improved vibrator separators, with self-feeder and hand cutter, and new style wind stacker; also a full line of portable and traction engines, threshers, grain drills, spring-tooth harrows, cultivators, corn planters, etc.

**Southern Timber Lands.**—Extensive tracts of timber land in the South are awaiting development. Much of the properties can be held for investment, and will steadily appreciate in value. About 150,000 acres of land, containing pine, white oak and hickory, located on the Queen & Crescent Route in Louisiana, is now offered for sale. A large part of the land is available for farming purposes after the timber has been cut. Address Frank Y. Anderson, land commissioner, Queen & Crescent Route, Birmingham, Ala.

**Activity at Covington.**—One of the progressive towns of Virginia is Covington, and recently some important improvements have been made to its industries. The Allegheny Pin & Bracket Co. has recently purchased the Covington Light, Ice & Cold Storage Co., built a new and modern electric-light and power plant, is operating a 10-ton ice factory, and its pin and bracket factory is being operated by power from the new works. The Allegheny Company manufactures locust and oak insulator pins and brackets, spokes and handles of all kinds, etc. Its daily output of pins is 20,000.

**The Myers Picnic.**—One of the interesting events of each summer is the annual picnic of the employees of the establishment of Messrs. F. E. Myers & Bro., Ashland, Ohio. The third annual outing was held recently, and was attended by about 3000 persons, including the employees and their families. Good-fellowship between employer and employee is always a significant sign of fair treatment, and the crowd attending the above-mentioned outing showed appreciation of Myers & Bro. The picnic was held at Silver Lake, and it required three trains of twelve to fifteen cars each to carry the crowd.

**An Otis Installation.**—Interborough Railroad, New York, has contracted for an escalator to be installed at the Thirty-third street station of the Sixth Avenue elevated road. The escalator will be placed on Broadway just north of Thirty-third street, and will carry passengers direct to the downtown station. A foot bridge will extend over the tracks to the uptown station, and it is anticipated that a majority of the north-bound passengers will avail themselves of the escalator and foot bridge, thus avoiding the laborious climb of the stairway used at present. Otis Elevator Co. of New York, Chi-

cago, etc., will make and install the equipment.

**Modern Hose Couplings.**—Compressed air, as applied to various tools and machines, has come to be one of the most useful, safe and economical forces used in manufacturing. But its practical application almost necessitates the use of air hose with convenient and quick-acting couplings. The time-honored screw couplings are none too convenient and none too quick-acting. It is claimed that "Quick as Wink" hose couplings can be connected and disconnected in one-tenth the time required for screw couplings. They are simple in construction and not liable to injury. They are airtight under any pressure. For full particulars address the manufacturer, W. J. Clark Co., Salem O.

**Sawyer Man Supply Depots.**—One of the prime requisites for the successful business of today is to make quick deliveries, and the "when" is often considered of more importance than the "how much." To further facilitate the prompt filling of orders, the Sawyer Man Electric Co. has recently established a distributing depot at the central stores of the terminal warehouse in West Twenty-eighth street, New York. Here are kept over a million lamps in stock, so that any and all calls may be speedily and completely answered. A similar depot is situated at Thirtieth and Market streets, Philadelphia, and others in Boston, Buffalo, Syracuse, Pittsburg, Charlotte, Chicago, Denver, St. Louis, Atlanta, New Orleans, San Francisco, Seattle and other centers of trade.

**Large Filter Contracts.**—Among recent large filter contracts awarded Wm. B. Sealife & Sons Co., Pittsburg, Pa., were the following: Rahway, N. J., 3,000,000 gallons per day, gravity type; Consolidated Water Power & Paper Co., Grand Rapids, 2,000,000 gallons per day, gravity type; D. A. Tompkins Co., Charlotte, N. C., 500,000 gallons per day, gravity type; Troy Laundering Co., Columbus, Ohio, 30,000 gallons per day, pressure type; Duquesne Club, Pittsburg, 125,000 gallons per day, pressure type; Bessemer Building, Pittsburg, 175,000 gallons per day, pressure type; Phipps' Public Bathhouse, Pittsburg, 175,000 gallons per day, pressure type; Colorado Fuel & Iron Co., Pueblo, 25,000 gallons per day, pressure type; La Belle Iron Works, Steubenville, Ohio, 60,000 gallons per day, pressure type; Capitol City Construction Co., Washington, D. C., 45,000 gallons per day, pressure type; Tolman Laundry Co., Washington, D. C., 60,000 gallons per day, pressure type.

**Extraordinary Shipment of Windlasses.**—About a week ago was noticed on the Providence Line pier at New York a lot of seven windlasses being discharged, which, upon inquiry, was found to be destined for the Amazon river, S. A. These windlasses were manufactured by the American Ship Windlass Co. of Providence, R. I., for the Lidgerwood Manufacturing Co. of New York, which has the contract to furnish machinery for landing merchandise and loading cargoes of rubber on pontoons some distance from the shore in consequence of shoal water. These windlasses are worked by hand, and are used to hold these pontoons in place, having a holding force of twenty tons, so that a trolley can be constructed from the pontoons to the shore, over which cargoes will pass. These windlasses have been ordered to replace those of English manufacture, which require a large number of natives to work them, while those of American manufacture, it is claimed, can be easily operated by three men. Six weeks from the time the order was received the seven windlasses, weighing over 80,000 pounds, were at New York ready for shipment.

**Independent Oil Business in Texas.**—In connection with the continuance of oil developments in Texas, it is interesting to note that the Gulf Refining Co. operates what is claimed to be the largest independent refinery in the world at Port Arthur. The company is closely allied with the J. M. Guffey Petroleum Co., which is the largest producing and pipe-line company in the Texas field, practically controlling the Spindle Top and Sour Lake fields. The Gulf Company's products are transported to its various distributing stations in the North by the J. M. Guffey Petroleum Co., which has in operation seven steel-tank steamers and three steel barges with a total monthly carrying capacity of 20,000,000 gallons, in addition to full equipment of small barges and tugs for making harbor deliveries. This company also has large tankage at Gibson's Point, Philadelphia, and Bayonne, N. J., with a storage capacity of about 10,000,000 gallons at each point, and has in course of erection a large tank station at Beverly, Mass., in Boston harbor. In addition to the daily production

which the Guffey Company has at Spindle Top, Sour Lake and other points in Texas, it carries in steel tankage above ground about 4,000,000 barrels of crude oil. A large number of tank cars are always in service, fully equipped to make deliveries by rail as well as by water.

**Recent Wolf Sales.**—The following sales were made by the Wolf Company's export and Atlantic coast department, 804 Pennsylvania Building, Philadelphia, since May 15: Seeleys Sons Co., Germantown Junction, Philadelphia, one double 9x30 Wolf roller machine for grinding corn; Melvin Becker, Berne, N. Y., a two-barrel rye mill and a 40-bushel per hour buckwheat mill, using the gyrator for bolting; Chester (Pa.) Milling Co., machinery for grinding two tons of chop feed per hour, including one attrition mill and Mammoth crusher, 20 to 30-bushel cornmeal mill using one six-roll Columbian feed mill, Wolf Special cornmeal purifier, reel, corn scourer, Wolf-Draver dust collectors, scales, etc.; also machinery for receiving and cleaning 600 bushels of grain per hour, using the improved Imperial double receiving separator, power grain shovel and hopper scales, and the machinery for blending twenty to thirty barrels of flour per hour; Fowles Arlington Mills, Arlington, Mass., 200-barrel whole wheat flour mill, gyrator for bolting; W. B. Cooper, Slate Hill, Pa., 25-barrel Wolf gyrator mill; J. F. Johnson Milling Co., Bridgeton, N. J., 75-barrel Wolf gyrator mill and 35-horse-power Wolf-Kelser horizontal turbine to drive same; Keasby & Mattison Co., Ambler, Pa., four Wolf automatic tubular dust collectors to collect magnesite dust; David Worman, Frenchtown, N. J., one 6x20 double-roller machine, shafting, pulleys and gearing; H. A. Stoothoff Co., New York, a gyrator for bolting tobacco; also some large elevators.

**Nuttall Gearing Plant.**—Gearing of modern design and manufacture, after the most approved methods suggested by actual practice, is in large demand throughout the industrial world. Buyers of gearing know that this is a product that should approach perfection to the nearest possible point, and are well aware of the difficulty in securing this kind of gearing. One of the most successful manufacturers of gears, pinions and trolleys for various kinds of machinery is the R. D. Nuttall Co. of Pittsburg, Pa. This company's extensive plant at Fayette street and Garrison Place has for some years been supplying its specialty of cut or planned gearing from standard specifications or to order. The company does not make or sell cast or molded gearing of any description. It believes that gearing designed to do the work required assures the full productive capacity of the machine with use of minimum amount of power. Nuttall gearing has become in such great demand that during the past two years a largely-increased output was called for by purchasers, and large sums of money have been expended for installing additional machinery and otherwise providing for the trade. Now again the company finds it necessary to add twenty-three of the latest type gear-cutting machines, as well as additional worm-gear machinery, mills, lathes, power equipment, etc., to correspond. This order for new gear-cutting machinery is believed to be the largest individual order of its kind ever placed, and the additional installation, the company claims, will give it the largest and most complete gear-cutting plant in the world.

**Concerning 300,000 Injectors.**—What such a number of injectors means may be briefly told. On the 15th day of July the Penberthy Injector Co., Detroit, Mich., placed the number 300,000 on one of its "Penberthy" automatic injectors, having completed this number of injectors in just a little over sixteen years. The company considers this is a most remarkable record, especially when it is taken into account that it took nearly ten years of hard work to convince engineers that an automatic injector was a practical device, and to manufacture and sell the first 100,000 machines. It is somewhat difficult to comprehend what is meant by 300,000 injectors. Possibly the following facts may help to an understanding of the subject. Basing the figures on the average capacity of the injectors sold during the past twelve months, the 300,000 "Penberthy" automatic injectors on the market will handle in one hour 100,500,000 gallons of water. This amount of water, if pumped into an upright tank fifty feet square, would require the tank to be over a mile high, or, to put it in another way, if the output of these 300,000 injectors were combined into one stream, they would supply a river ten feet deep and 250 feet wide, and keep up a steady flow of water at the rate of a little over one mile per hour. If the 300,000 injectors were all connected to one source of water supply, they would

In ten hours completely drain a lake ten feet deep, one mile long and a half-mile wide. The "Penberthy" injector is acknowledged as a standard among automatic machines everywhere, and is claimed to have never been surpassed in its working qualities by any injector retaining the automatic feature until the above-named company placed on the market a few years ago its auto-positive hot-water, high-pressure restarting injector.

**Heating and Ventilating Shops.**—To design, manufacture and install satisfactory equipments for heating and ventilating one-story shop buildings is an important task. During recent years great perfection has been reached in this direction by the use of the fan. An equipment of the character referred to has recently been put in position in a large shop and office building erected at Steelton, Pa., by the Pennsylvania Steel Co. In the shops there are eight fan and heater equipments, consisting each of a steam-coil heater in connection with a steam-engine-driven exhaust wheel. The heaters are built on patent corrugated cast-iron sectional bases, with one-inch steam pipes set staggered and at proper distance on centers to obtain highest efficiency from the heating surfaces without restricting the passage of air. The sections rest on heavy wrought-iron bases, with ample provision for contraction and expansion. The fans are enclosed in three-quarter steelplate housings, the lower part of the fan scroll being underground and forming a part of foundation. They are driven by direct-connected horizontal side-crank engines. A system of galvanized-iron pipe distributes the air, it being discharged through branch drop connections having outlets near the floor. The ducts are of large size, with bends of long radius to reduce frictional losses to a minimum. Each drop pipe is fitted with a butterfly damper with counterweight for holding same open or closed. The apparatus will heat the buildings to 65 degrees F. in zero weather. Under the conditions of the contract the heater must take all the fresh air from out of doors. However, as the number of occupants in the building are few compared with the cubic contents, it will be found perfectly feasible and more economical to return a certain portion of the air from the buildings, and the apparatus is so arranged that this can be done. The apparatus is capable of changing the air in all the buildings every twenty-five minutes, and in one shop every twenty minutes. The office building in connection is heated by the same method, the apparatus being designed to furnish 21,430 cubic feet of air per minute, which is discharged into rooms having a total capacity of 29,763 cubic feet, thus providing for a complete change of air every fifteen minutes. The fan of the office building heating plant is direct connected to a Sturtevant motor running at 200 revolutions per minute. The B. F. Sturtevant Co. of Boston designed and built the equipments.

#### TRADE LITERATURE.

**Makes It His Business.**—Those who want to have ideas along business lines developed into productive dollars are invited to address Hugh C. Risdon, Box 116, Washington, D. C. Mr. Risdon makes it his business to undertake that kind of work, and has been successful in organizing and locating manufacturing plants in the South. He has advantageous locations available for all kinds of plants. Send for his leaflet of brief details.

**Military Promptness.**—That's the kind of promptness is resorted to by the Ewing-Merkle Electric Co. in filling orders for electrical machinery and supplies, an exceptionally large stock of which it always has on hand. The company is issuing a leaflet reminding purchasers of its ability to ship apparatus with "military promptness." Special bulletins or the "Green Book" are ready for mailing. Address the offices at St. Louis, Mo.

**For Foundry Men.**—Timely information and the latest data interesting molders and foundrymen is seen in the July issue of the Obermayer Bulletin. This little publication every month contains new and interesting details concerning developments in foundry work, and its appearance is eagerly awaited by those who have become acquainted with the contents of previous issues. For a specimen copy address the S. Obermayer Co., 1318 Majestic Building, Detroit, Mich.

**The Marsh Steam Pump.**—One of the briefest of trade publications is a leaflet now being issued by the American Steam Pump Co. of Battle Creek, Mich. This leaflet gives a clear and most concise description of the Marsh steam pump, standard for all duties. The general design of Marsh Standard Boiler Feed Pumps ranges from 10 to 1500 horsepower. Only the very best material and

workmanship is employed in their construction, and each pump is carefully tested before being shipped. Address the company at Battle Creek, Mich., for further data.

**Storage Batteries in Isolated Plants.**—The application of storage batteries to isolated plants is the subject of a publication now being issued. Much interesting information is presented showing the value of such application. Special reference is made to the installation of the chloride accumulators in the building of the Ferguson-McKinney Dry Goods Co. of St. Louis. The Electric Storage Battery Co., Allegheny avenue and Nineteenth street, Philadelphia, Pa., manufacturer of the accumulators, issues the treatise mentioned in Bulletin No. 79.

**Labor-Saving Machinery.**—This is always an interesting subject to manufacturers and other industrial operators who desire to keep fully posted on the most modern ways of saving time, labor and money. New situations are constantly suggesting improvements to old equipment, and new equipments to meet new conditions, and the Jeffrey Manufacturing Co. of Columbus, Ohio, keeps always abreast of the times. Jeffrey machinery is used extensively throughout the modern industrial world. The company's circular No. 73 tells briefly about its labor-saving machinery. Inquiries for copies are solicited.

**New Westinghouse Literature.**—Westinghouse Electric & Manufacturing Co., Pittsburgh, Pa., has issued Circular No. 1037, devoted to an illustrated description of its engine-type alternators. One of the largest machines of this kind built by the Westinghouse shops is that of the Manhattan Railway of New York. It is a 5000-kilowatt rotating field alternator. Circular No. 1067 describes the air-blast transformers. The largest transformers in the world are those used in transmitting power from Chambly to Montreal, Canada. They are each of 2750-kilowatt capacity, of the air-blast type, all made and installed by the Westinghouse Company.

**Rubber Mats and Treads.**—Corrugated rubber matting, mats and treads are in extensive use throughout the United States. They make an almost noiseless and very durable floor covering. Their advantages make them desirable for use in hotels, railroad cars and stations, steamboats and various other places. The Boston Belting Co. manufactures a complete line of such mats and kindred articles. This company is well known, and has been since its establishment in 1828 manufacturing vulcanized rubber goods, belting, hose, packings, etc. A recent catalogue of mats, etc., can be obtained from the main offices at 256 Devonshire street, Boston, or from the New York office at 100 Reade street.

**The Machine-Shop Problem.**—The equipment and management of machine shops are vital factors in successful and profitable operation. In systematizing and simplifying the conduct of such establishments is required expert knowledge and experience gained from actual practice. The machine-shop problem is the subject of a pamphlet prepared for presentation at the June meeting of the American Society of Mechanical Engineers, and valuable information concerning the modernizing of plants is contained in this treatise. Chas. Day is the author, and issues this paper in pamphlet form for the consideration of the trade interested. Mr. Day is a member of the firm Messrs. Dodge & Day, the well-known modernizing engineers of Nicetown, Philadelphia, Pa.

**Steam and Electric Turbine Pumps.**—The efficiency of the steam turbine pump is resulting in a demand for the best equipments of this character. It is highly recommended for water-works systems by the best engineering talent. Appreciating the many advantages of a high-grade pump of this type, the De Laval Steam Turbine Co. is manufacturing pumping units, consisting of steam turbine and turbine pump mounted on a common base and direct connected by flexible coupling. Interesting data concerning the equipments can be obtained by addressing the D'Olier Engineering Co. for Bulletin No. 5, series T. The D'Olier Company is one of the best-known general mechanical and electrical engineering concerns. Its offices are at 119 E. Eleventh street, Philadelphia.

**Modern Crucible Steel.**—Among the many materials that enter into general industrial work and are used in the manufacture of machines, tools and other mechanical equipment is crucible steel, open-hearth steel and sheet and bar copper. The production of these metals has reached its highest possible point in American establishments, the Park Steel Co. being one of the leaders in this direction. A booklet of pocket size now

ready for distribution gives particulars of Park's self-hardening tool steel, "Rex" high-speed steel, double special tool steel, file steel, axe and hatchet steel and the numerous other products of the Park works. The Park Steel Co. is one of the constituent plants of the Crucible Steel Co. of America, which can be addressed at its main office in the Frick Building, Pittsburgh, Pa., for copies of the publication referred to.

**Newhall Forgings and Castings.**—One of the best-known lines of forgings and castings now on the market is called to mind when the name Newhall is mentioned. Material of the character referred to as manufactured by the Newhall Chain, Forge & Iron Co. is well known to users and builders of machinery. Chains of various kinds in different sizes and styles for various purposes bearing the trade-mark "Warwick," and other products trade-marked "Trident," are made at the Newhall plant. Shackles, swivels, boat spikes, shackel hooks, connecting flukes, rafting dogs, mooring posts, capstans, round and square rolled iron, flat iron, anchors, davits, screw bolts, marine railway rollers and many other articles in iron and steel forging are listed in the Newhall catalogue No. 55. For copies of the publication address the company at 9-15 Murray street, New York.

**A Peerless Publication.**—Such is that which is being issued in reference to a line of engineers' specialties which have earned an enviable reputation. This booklet is tastefully printed, in handy pocket size, and contains brief but pointed facts about the merits of Rainbow packing, Eclipse gaskets, Peerless packing of different styles and sizes, rubber belting, steam hose and other mechanical goods manufactured by the Peerless Rubber Manufacturing Co. More than 1500 tons of Rainbow packing were sold last year. This is the packing that withstands the action of all alkalies, will not harden under any degree of heat, needs no baking, etc. Dealers and users who want to be fully informed as to the highest-class mechanical rubber goods on the market should send for this latest catalogue—No. 58—of the company. Address the offices at 16 Warren street, New York.

**Steam Locomotive Cranes.**—A few weeks' use of a locomotive crane about any yard handling heavy material would prove to be of such profit as to be indispensable. The superiority of this style of crane for railway uses is recognized by many prominent buyers of this class of equipment, and builders of these cranes find the demand on the increase. The North Penn Iron Co. of North Penn Junction, Philadelphia, Pa., issues Bulletin S 705 in describing its steam locomotive cranes, machines that have earned a reputation of the highest character with the leading railroads and other users throughout the country. The bulletin shows one crane that has a capacity of 20,000 pounds at twelve feet radius; thirty feet is greatest radius, at which cranes will raise 7000 pounds without track clamps or outriggers. Inquiries for information regarding the North Penn make of cranes is solicited.

**Modern Polishing and Grinding.**—Strictly first-class grinding machines, as well as all fine machine tools, are essential in well-equipped plants for manufacturing iron products. They should be substantially mounted to render them safe and enable them to do satisfactory work. The modern grinding and polishing machinery manufactured by the Webster & Perks Tool Co. of Springfield, Ohio, is designed and constructed from practically applied scientific principles, and has many new and improved features. This company has issued a leaflet briefly outlining details of its one-inch bench grinder, one-and-one-quarter-inch self-oiling bench grinder, improved No. 1 and No. 2 self-oiling buffin and polishing lathe and other machines. It is claimed that these grinding and polishing machines will always run true and stand up to the work, thus producing the best possible results. Users of this class of equipment are invited to write for further details.

**Blueprints of Important Drawings.**—It is safe to assert that there is not an engineer or architect who has not at times been greatly inconvenienced by the impossibility of getting good blueprints of important drawings at the time required. Cases are even heard of where important work has been stopped until a spell of cloudy weather had passed and the blueprinting department was able to make the blueprints necessary before continuing the work. Recognizing the urgent need for some reliable and efficient means of making a blueprinting department absolutely independent of weather conditions, the Pittsburgh Blueprint Co. introduced its Patent Cylindrical Electric Copier, and has installed many of them in the offices of

some of the largest and most conservative establishments in this country. That the best results can be obtained by the use of the machines has been fully demonstrated. Literature giving full details can be obtained by addressing the Pittsburgh Blueprint Co. at its offices, 1505 Park Building, Pittsburgh, Pa.

**Modern Wood-Rim Pulleys.**—An interesting method of construction is that used in manufacturing wood-rim pulleys by the Chase Pulley Co. of Providence, R. I. The rim is built up of thoroughly kiln-dried wood segments, each course being glued to the next and fastened by wood screws. The butts in each course are left open and then wedges are driven in on hot glue, thus making a perfect joint. The feet on the outer ends of the arms are bolted to the rim and then hardwood wedges are driven into the recesses shown in the feet, keying the arms to the rim and making a connection which will not come loose. This method of fastening the arms to the rim has stood the test of years, and is safe. Every pulley is turned automatically in the lathe, which ensures accuracy in the finish of the rim. All the Chase-Amoskeag wood-rim pulleys with iron hubs and arms are accurately balanced and inspected before leaving the shops. The company is now distributing literature on its product.

**The Burr Cold Saw.**—It is conceded that a circular saw on a proper machine is the most satisfactory tool known for the rapid, efficient and economical cutting off of iron and steel. The circular saw, which is, in fact, a milling cutter, is continuously cutting with each of its many cutting points, doing its work with the slightest wear. Carrying with it a flood of oil, the saw runs perfectly cold, and with a very narrow kerf, cuts square with the stock and exactly parallel with its previous cut. In designing the Burr cold saw a machine has been produced which is simply stiff and powerful to put the limit of rapidity of cutting not up to the machine, but up to the saw. When this limit is reached, as in this machine, the cold saw will cut off stock. It is claimed, many times faster than the power hack saw, with no more attention, and with entire satisfaction as to smoothness and the parallelism of its cutting. Messrs. John T. Burr & Son, Kent avenue and S. Sixth street, Brooklyn, N. Y., manufacture the Burr Cold Saw, and are issuing a special descriptive pamphlet concerning the tool.

**Safety Water-Tube Boilers.**—This type is in great demand for power, steam heating, hot-water heating, etc. The advantages of the safety water-tube boilers are conceded by those most experienced in their use, and the increasing number of installations is one of the features of modern boiler practice. The Star Safety Water-Tube Boiler has been on the market for more than twelve years, and as built today embodies all the improved details which practice and use under varying conditions have demonstrated to be desirable. The Star forms a distinct class in boiler construction, it being a self-contained, internally-fired water-tube boiler. Its combined features have placed it in the front rank of standard boilers for commercial use. The A. D. Granger Co. builds the Star boiler, and is issuing Bulletin No. 2 to supply a thorough description of it, accompanied by illustrations and tables of value in understanding the efficiencies obtained. For copies of the bulletin address the New York office at 55 Liberty street, or Philadelphia office in the Stephen Girard Building.

**Industrial Plants.**—The economy and efficiency of large and small industrial plants are largely added to by applying scientific methods in the designing of such plants by expert architects and engineers. The modern specialist in factory construction makes the modern business man more efficient. He cuts down the cost of operating the plant, increases the output, raises the scale of wages and adds materially to the owner's profit. Valuable information concerning the designing of modern industrial plants is available to readers of "Industrial Plants," a journal devoted to modern building methods. This publication is issued monthly by Messrs. Ballinger & Perrot of Chestnut and Twelfth streets, Philadelphia. The firm acts as architects and engineers for industrial plants, and in its journal tells of the satisfactory results they have secured for many patrons. Messrs. Ballinger & Perrot have designed and erected cloth mills, hosiery mills, lace-curtain factories, carpet mills, steam laundries, yarn-mills machinery, iron and metal-working plants, dye-houses, private and public buildings and many other structures.

**Pratt & Whitney Small Tools.**—There is always a large demand in the machinery world for tools that are designed and manu-



factured with a view to affording users the best possible results. Such small tools as taps and dies, diestock sets for bolt and pipe threading, milling cutters, slitting saws, ratchet drills, lathe tools, tapping head, boiler punches, etc. have for many years been made by the Pratt & Whitney Co. with a success that is attested by thousands of users. This company's latest catalogue, No. 2, is devoted to its small-tool department, and presents a complete list of the class of tools referred to. Numerous illustrations—photographic reproductions of exceptional clearness—assist in showing the features of these tools. Special tools of all descriptions are made to order by the company, and many intricate and difficult patterns have been produced for exacting customers. For literature regarding Pratt & Whitney products, address the company's main plant at Hartford, Conn.; its New York offices at 136 Liberty street; St. Louis offices at 516 N. Third street, or other branches in Boston, Philadelphia and Pittsburgh.

**The Spencer Heater.**—The Spencer steam and hot-water heaters are not in the experimental or untried stage, the first one having been made over ten years ago. The first Spencer heater made was heated red hot without water the first night, and is still in operation, and has never had a tube changed. This boiler and several hundred other Spencer heaters have given perfect satisfaction. Being a combined water tube and return tubular boiler, it is claimed by its builder to be as far ahead of the teakettle cast-iron type of boiler in efficiency and economy as the modern water tube or return tubular is ahead of the old cylinder boiler. The tubes of the Spencer heater are special, and are properly expanded in place. They are remarkably durable. The Spencer heater is efficient and economical. It is a quick steamer, and requires the least attention. It will maintain a steady pressure at the number of pounds at which it is set, and will use the least possible amount of coal necessary to do it. Intending purchasers can learn the truth about the Spencer by asking "the man who owns one." The Spencer Heater Co., Scranton, Pa., builds the heater in reference. Send for descriptive pamphlet.

**Direct-Current Factory Motors.**—Efficiency and reliability are of first consideration in the design and construction of direct-current factory motors. This idea has been followed by the Rochester Electric Motor Co. of Rochester, N. Y., in offering its machines, and the type "C" apparatus is also of pleasing outline, compact, and may be readily modified to meet special requirements. The frame is a single casting, the end plates or bearing supports being bolted directly to it. These plates protect the armature and field windings from mechanical injury, and may be swung around so that the machine may be placed either on the floor, wall or ceiling. The company's motor is fully described and illustrated in Bulletin No. 65, and those desirous of having full particulars regarding the construction of the poles, field coils, armature core, armature windings, the commutator and other features are invited to send for literature. The Rochester Electric Motor Co. is meeting with great success in the introduction of these machines. Some of the most exacting users of electric power in factories are obtaining the highest degree of satisfaction from the Rochester motors and other electrical machinery. New York sales offices are maintained at 67 Cortlandt street.

**Pumping by Compressed Air.**—Interest in the production of compressed air economically and the manifold uses to which air power has been put in the way of operating motors, tools and appliances for saving labor has naturally been extended to the pumping of water and other fluids or semi-fluids. Therefore, today the advantages of pumping by compressed air are recognized by the engineer, municipal water board, mine-owners, manufacturers and everyone concerned in the problem of handling large quantities of water. The systems of pumping by compressed air manufactured, sold and installed by the Pneumatic Engineering Co. are explained in an illustrated pamphlet now being mailed to those interested. The company considers its subject under three heads—the air-lift pump, displacement pumps using air expansively, displacement pumps using direct pressure of air without expansion. In all conditions where experience and service are required the above company is prepared to undertake contracts for designing, building and installing compressed-air plants of every description. The Pneumatic Engineering Co. maintains its general offices at 128 Broadway, New York city, from which special information and estimates can be obtained regarding the character of compressed

air pumping plants indicated. The St. Louis offices are at 710 Lincoln Trust Building.

**Hogan Water-tube Boiler.**—This boiler is offered to steam users as meeting the present-day demands in the following important particulars: fuel, economy, efficiency, space occupied, durability and cost of maintenance. It is described and illustrated in a fine specimen of the printer's art now being distributed and ready for mailing to all inquirers. The Hogan boiler has been enthusiastically praised by some of the best-known steam users in the country, including John B. McDonald, the contractor for the great subway work in New York; chief engineer of the New York Tunnel Co.; Hughes Bros. & Bangs, the Syracuse (N. Y.) contractors for river and harbor improvements; the Madden File Co. of Middletown, N. Y.; the Lehigh Valley Silk Mills of South Bethlehem, Pa., and others. Southern steam users will be interested in noting that the general manager of the Mobile, Jackson & Kansas City Railroad, Mobile, Ala., believes the Hogan boiler to be the most economical boiler with regard to fuel. The railway's car shops, machine shops, forge shops, etc., are being operated by the Hogan boiler, using as fuel the scraps from planing mill and other departments. A clear description of the boiler's design, construction and operation, free from technicalities, can be obtained by addressing the builder, Riverside Boiler Works, Ridgefield Park, N. J.

**A Ruberoid Album.**—This publication should have the perusal of every dealer in and user of modern roofing. It is devoted, as its title indicates, to advancing the interests of Ruberoid roofing, the durability and efficiency of which is attested by its use on many of the largest and most important industrial plants, private and public buildings, not only in the United States, but also in various parts of the world. The Ruberoid album is one of the most presentable of trade publications recently issued. Its outer covers show the appearance of the roofing, which is a dark gray in color, presenting a smooth, neat surface when laid. Photographic reproductions of churches, factory buildings and other structures show, so to speak, the versatility which has assisted in making Ruberoid roofing so widely appreciated. It is used with equally satisfactory results on the smallest poultry-house or the largest factory. It is weatherproof, elastic, odorless, and after twelve years of successful demonstration as to its superior quality, the manufacturer finds facilities for production urged to the utmost. A large plant at Hamburg, Germany, supplies that section of the world. It is almost needless to add that the Standard Paint Co. of 100 William street, New York, of Chicago, Boston, London, Paris, Berlin, Sidney and other leading cities of the world is the manufacturer of the roofing above mentioned.

**Reynolds Corliss Engine.**—It is power that is the basis of mining, manufacturing and the various other kinds of industrial operations of our time. Engines for supplying power are designed and built from the specifications of the most expert engineers, and in accordance with conditions and difficulties met with in actual practice. The Reynolds Corliss engine is built in full variety to meet the demand that arises for all power purposes, street-railway engines, electric-lighting and pumping engines, blowing engines, rolling-mill engines, hoisting engines, etc. During the past twenty-five years the Allis-Chalmers Company, sole builder of the Reynolds Corliss engine, has manufactured more than 6000 of the Corliss type, and among them will be found some of the most notable examples of steam engineering in this country. It has always been the policy of this company to make every engine sold a complete success from an engineering and commercial standpoint, and to this end it has employed the best talent attainable, which, with its unequalled facilities for manufacturing, has made the enviable reputation this engine enjoys. Edwin Reynolds, under whose direction are designed and constructed the make of engines mentioned, has been identified with the manufacture of automatic cut-off engines for many years. The Allis-Chalmers Company has issued a new catalogue of its engines. The book is from the press of an expert in machinery catalogues, as can be readily appreciated by a glance at the letter-press and the remarkably clear photographic illustrations of scenes in the Allis-Chalmers engine works, and of the completed machines shown. The company's general offices are in the New York Life Building, Chicago.

**The Caldwell Tanks.**—With each passing year the Caldwell tanks and towers more firmly establish their reputation. The wood

used is the celebrated Louisiana Red Gulf cypress, of world-wide renown for remarkable durability. Both steel and wood tanks are made by the Caldwell Company, and three types of towers—an all-wood structure, a combined wood and iron, and an all-steel structure. The size and strength of the hoops on Caldwell tanks and tubs is determined by exact calculations of the same character as are used to ascertain the strength of the members of a bridge or a Caldwell tower or any other engineering construction work. Being of correct design and construction, measured by the most rigid requirements, these tanks and towers will carry their contents at all times, in any kind of weather, with entire safety. In support of this claim the maker states that not as yet has one of its tanks fallen down or blown down, and many of them have been in the paths of hurricanes and cyclones. For a quarter of a century the W. E. Caldwell Co. has studied its specialty, and earned a name for it that is widely known wherever tanks, tubs and similar vessels for all kinds of liquids are used. The sixteenth annual edition of the Caldwell catalogue is now ready for distribution. It gives all particulars regarding Caldwell product. The Caldwell offices and the large plant for manufacturing are located at Louisville, Ky.

**Ingersoll-Sergeant Equipments.**—The enormous demand for raw materials and the great activity in construction work of all kinds at present prevailing is constantly enlarging the market for modern rock drills, mining and quarrying machinery. Designing and building such equipments constitutes the special work of leading American engineers and manufacturers whose product has become known all over the civilized world. Probably no greater success has been achieved in this field than that to which the Ingersoll-Sergeant Drill Co. can point after its many years of successful catering to users and conditions everywhere. This company is now issuing its new catalogue No. 43, which will be the first of a series to illustrate and describe in complete form all classes of Ingersoll-Sergeant machinery. The photographic reproductions and descriptive text are nearly all new, and the catalogue itself is an unusually handsome product of a modern printing house. In essential features of practicability, efficiency and durability, the Ingersoll-Sergeant apparatus has become known to operators and engineers who have sought to obtain the best possible results in the development of mining properties, the construction of tunnels and the many other kinds of contraction work found necessary in the wonderful industrial advance of the present day. Requests for catalogue may be addressed to the Ingersoll-Sergeant Drill Co. at its main offices in the Havemeyer Building, 26 Cortlandt street, New York.

**A New Igniter.**—A new dynamo for igniting gas and gasoline engines has been placed on the market by the Auto-Igniter Co., 161 Washington street, New York city. It is an inductor-generator type of machine, and is remarkable for having absolutely no wearing parts. It also dispenses entirely with batteries and spark coils. The machine consists of an iron disk, with a portion of the iron cut away and the space filled with non-magnetic metal, revolving between the poles of a powerful compound magnet. The disk is fixed to the engine-shaft either on the end of the shaft on inside the hub of the fly-wheel, and the generator is fixed to the engine frame or to the floor. One of the magnet poles has two cylindrical projections, and the active coil is wound upon one of these projections. As the disk revolves the slot passes the polar projections once in every revolution, and the change in flux produced thereby induces an electromotive force in the coil. This electromotive force is available to produce current for about 45 degrees of every revolution, which is sufficient for engines requiring no more than one explosion for each revolution of the engine shaft. When more explosions are needed, as in some multi-cylinder engines, the disk is suitably cut away in two or three places. For igniting by mechanical device no spark coil is used, as the inductance of the active coil is sufficient to give a powerful spark at the interrupter. With 200 revolutions per minute this spark is equal to that obtained with eight or more coils of Edison-Lalande battery and an ordinary spark coil. The machine is equally applicable for jump-spark work by using an induction coil with a mechanical interrupter. At the moment the slot leaves the polar projections with the active coil a high peak is produced in the electromotive force. This wave is utilized in starting the engine by so setting the inductor that the break of the ignition points occur just as the iron is leaving the pole.

By this means a sufficient current for igniting is produced by turning the engine over by hand or by other means. This is an important feature, as the engine can thus be started with this dynamo without the use of auxiliary starting batteries. By means of the double polar projections used in the design of this machine, the magnetic circuit of the permanent magnets remains closed in every position of the inductor. Actual measurements made on magnets taken from machines in use for some time have shown that these magnets had actually increased in strength while in use. This is a valuable feature, as it secures the permanency of the magnets. As there is neither a commutator nor brushes nor bearings to wear and require attention, the machine will last indefinitely and incur no expense whatsoever after the first cost. A number of these dynamos are already in use on single and multi-cylinder engines and are giving excellent satisfaction. A leaflet illustrating a description of the device is now ready for distribution.

## BULLS IN COTTON.

### A Market View of Benefits Wrought for the South.

As a part of the game intended to counteract the advancing movement in cotton, certain financial columns in the East published statements to the effect that the banks of New York had called, or would call, the loans made to leaders in the bull movement. Such publications did not have the effect intended, inasmuch as it was pretty generally understood that the leaders in the movement were using to a large extent their own money or that of their associates, and that their borrowings, a large percentage in Europe, were on time and not a single dollar on call. Bears who are expecting them to be called for money will be sadly left. In this connection Pearsall's Bulletins of New York quotes the following from Atwood Violet & Co. of New York, regarding the leaders in the bull movement:

"The South owes to these people a debt of thanks of very large proportions, and as Southern men ourselves, and as one of their representatives, in taking up in July and August deliveries, we can say this with full knowledge of what we are writing about. The world's spinners have never had consideration for the cotton planter when production was greater than the demand, and now that these positions have been reversed, the New Orleans bull interests have been abused and villified because of carrying out what was an entirely legitimate business transaction. That is, they bought the contracts in the New York market and held on to them, and when these contracts matured they asked for the cotton, and it was given to them. This has been the nature and extent of their offending: What would have happened had these New York parties sold out their July contracts on the market instead of taking the cotton? There is but one answer, namely, that the bears would have sold prices down at least two cents below the highest at which July and August sold last month. Now, because the bull interests saved the market from such a depression, which would have enabled the spinners to have bought their cotton that much below current value, the former are accused practically of stopping the world's cotton mills and a great deal more of similar rubbish. It is further provided by the New Orleans parties in every sale of spot cotton being made by them that under no circumstances shall this cotton be re-delivered on contract in the New York or New Orleans markets, therefore limiting the sales to spinners alone, and the prices they are asking for the cotton are only those in keeping with the situation from a supply and demand point of view.

"Furthermore, by these requirements of the bulls the market has been saved from being depressed in subsequent

months, as would have been the case had this cotton been retained in the New York market, and as would have occurred had the July and August long interests sold out their contracts instead of accepting the cotton as it was tendered. New Orleans, however, stood in the breach, and while this was not for philanthropic reasons, nevertheless the South will be the beneficiary during the next season. Were it not the intention of the New Orleans interests to move this cotton from the New York market, we believe contracts for each month during the next twelve months would have sold below the price of the same month in the New Orleans market. This is a matter of exceeding importance to every cotton market south of Mason and Dixon's line."

Discussing the effects of the bull movement, Mr. Samuel H. Buck, a member of the firm of Buck & Pratt of New York, and interested in cotton mills in Alabama, said at New Orleans:

"Cotton mills will not close down on account of the high price of cotton. The spinners will keep right on with their spinning regardless of the price of cotton, and the bulls, W. P. Brown, Frank B. Hayne and Dan J. Sully, are the best friends the South has, and they are my friends, too."

"While no great amount of money can be made by the mills at the present price of cotton and the present price of cotton goods, yet the mills will keep in operation and the spinners at work. What will happen most likely will be the appreciation in value of cotton goods. People must wear the same clothes during the era of high-priced cotton that they wear when cotton is very cheap. The question will simply resolve itself into this: Men will have to pay more for the clothes they wear. It is not good sense to say that because cotton reaches a certain price that the mills will have to close down. Of course, there may be a surplus stock of goods on hand that will satisfy the trade for a stated period, but when that surplus is exhausted more goods will have to be forthcoming. The price of cotton in its raw state will not stop the wheels of the mills. Only one thing will stop them, and that is the entire lack of cotton on which they may operate."

#### To Work Shale Deposits.

Mr. H. J. Penn, Box 382, Winston, N. C., writes to the Manufacturers' Record that he would like to correspond with a practical sewer-pipe and brick man who would be willing to invest \$1000 or \$2000 in establishing a plant for working shale beds. He writes:

"I have control of ten to fifteen acres of land on which there is an excellent deposit of shale, such as is used for making sewer pipe and high-grade brick. This land is on two railroads, and adjoins a tract from which a terra-cotta company is hauling 250 to 300 carloads of shale to its plant, a distance of thirty-three miles, and at a freight cost of from \$3000 to \$5000."

It is reported from Cincinnati that the Wabash Railroad has made an agreement with the Chicago, Cincinnati & Louisville Railway for entrance to Cincinnati, this line to be formed by consolidating the Chicago, Richmond & Muncie Railway and the Cincinnati, Indiana & Western. It is further reported that traffic arrangements have been closed with the Louisville & Nashville south from Cincinnati.

## FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

### Review of the Baltimore Market.

Office Manufacturers' Record,  
Baltimore, Md., August 26.

Genuine summer weather and the absence of many persons from the city combined to make the Baltimore stock market dull and uninteresting during the past week. It was a period of very little movement in anything. Seaboard issues, recently so active, faded almost out of sight, and United Railways stock and bonds were likewise dull. There was little trading in G. B. S. Brewing securities, but Consolidated Gas was very dull and Cotton Duck stagnant. Barring two or three transactions, there was nothing doing in bank and trust-company shares, and the general run of investment securities showed little movement.

In the dealings United Railways common sold at 11 and 12, and then dropped to 10½, while the income bonds fell back from 64 to 63½; the 4 per cents sold from 92½ to 93, and United Light & Power bonds at 84. Consolidated Gas common changed hands at 65; the 6 per cents at 108½; the 5s at 109½ and 110½, and the 4½s at 100½. Seaboard common went from 22½ to 22½, then rose to 22, but dropped to 21, recovering to 21½, while the preferred fell from 35¼ to 34½; the 4 per cents sold from 77½ down to 77, reacting to 77½; the 5s sold at 101½. G. B. S. Brewing common was traded in at 10; the incomes at 32 and 33; the income scrip at 32, and the 1sts from 49½ down to 49.

Union Trust sold at 62½, and Maryland Casualty at 47½; Farmers and Merchants' Bank at 68, and Bank of Baltimore at 115½.

Other securities traded in were as follows: Atlantic Coast Line common, 112½; Atlantic Coast Line 1st consolidated 4s, 92½ to 93; Georgia, Carolina & Northern 5s, 106 and 106½; Georgia & Alabama Consolidated 5s, 106; Northern Central stock, 100 and 101; Consolidation Coal, 70; Charlotte, Columbia & Augusta 2ds, 114 and 115; Georgia Southern & Florida 5s, 110; Virginia Midland 1sts, 106½; George's Creek Coal, 87; Western North Carolina 6s, 114; West Virginia Central 6s, 110; Virginia Century, 1990, 90; Columbia & Greenville 1sts, 114½; Carolina Central 4s, 94.

### SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended  
August 26, 1903.

Railroad Stocks.	Par.	Bid.	Asked.
Georgia Sou. & Fla. 1st Pref.	100	95	98
Georgia Sou. & Fla. 2d Pref.	100	68	72
United Railways & Elec. Co.	50	10½	10½
Seaboard Railway Common	100	21½	22
Seaboard Railway Preferred	100	34½	34½
Atlantic Coast Line of Conn.	100	240	255

Bank Stocks.	Par.	Bid.	Asked.
Citizens' National Bank	10	28	30
Farmers & Mer. Nat. Bank	40	67	68
First National Bank	100	147½	148
Manufacturers' National Bk.	100	102½	103
National Bank of Baltimore	100	115	116
National Bank of Commerce	15	30	30
National Exchange Bank	100	190	190
National Howard Bank	10	11½	11½
National Union Bank of Md.	100	117	117
Second National Bank	100	190	205

### Trust, Fidelity and Casualty Stocks.

American Bonding & Trust	50	88	88
Continental Trust	100	184	185½
Fidelity & Deposit	50	150	150
Maryland Casualty	25	50	50
Mercantile Trust & Deposit	50	160	160
Union Trust	50	64½	65½
U. S. Fidelity & Guaranty	100	130	130

Miscellaneous Stocks.	Par.	Bid.	Asked.
G. B. S. Brewing Co.	100	14	14
United Elec. L. & P. Pref.	50	40	40
Cotton Duck Voting Trust	100	1	2
Consolidation Coal	100	67½	68
George's Creek Coal	100	87	87
Consolidated Gas	100	64½	65½

Railroad Bonds.	Par.	Bid.	Asked.
Atlanta & Charlotte 1st 7s, 1907	100½	106½	106½
Char., Col. & Aug. 2d 7s, 1910	112½	112½	115

Columbia & Greenville 1st 6s, 1916	112½	112½	112½
Georgia, Car. & North. 1st 5s, 1920	106	107	107
Georgia South. & Fla. 1st 5s, 1945	109½	111	111
Georgia Pacific 1st 6s, 1925	116	116	116
Petersburg, Class A 5s, 1925	106½	106½	106½
Petersburg, Class B 6s, 1925	120	120	120
Piedmont & Cum. 1st 6s, 1911	102½	102½	102½
Raleigh & Augusta 1st 6s, 1926	116	116	116
Richmond & Danville Gold 6s, 1915	112	112	112
Savannah, Fla. & West. 5s, 1934	110	110	110
Seaboard & Roanoke 5s, 1926	108½	115	115
Southern Railway Con. 5s, 1904	112½	112½	112½
Virginia Midland 1st 6s, 1906	105½	105½	105½
Virginia Midland 2d 6s, 1911	108½	108½	108½
Virginia Midland 5th 5s, 1926	108½	108½	108½
West Virginia Central 1st 6s, 1914	113	113	113
Wilmington, Col. & Aug. 6s, 1910	111½	111½	111½
Wilmington & Wel. Gold 5s, 1935	115	117½	117½
Charleston City Railway 5s, 1925	103½	104½	104½
Charleston Con. Electric 5s, 1909	85	96	96
Knoxville Traction 1st 5s, 1928	101	101	101
Newport News & Old Pt. 5s, 1938	105	105	105
Norfolk Street Railway 5s, 1944	110	110	110
United Railways 1st 4s, 1949	32½	33	33
United Railways Inc. 4s, 1949	63½	63½	63½
Seaboard 4s	67½	67½	67½
Seaboard 10-year 5s	104½	104½	104½
Georgia & Alabama 5s	106	106	106

Miscellaneous Bonds.	Par.	Bid.	Asked.
G. B. S. Brewing 3-4s	187½	49½	49½
G. B. S. Brewing 2d Income	31½	32½	32½
United Elec. Light & Power 4½s	84	84	84
Consolidated Gas 6s, 1910	108	110½	110½
Consolidated Gas 5s, 1939	109½	110½	110½

### SOUTHERN COTTON MILL STOCKS

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for  
Week Ending August 25.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	77½	77½
Aiken Mfg. Co. (S. C.)	90	90
Anderson Cotton Mills (S. C.)	121	125
Augusta Factory (Ga.)	63	63
Avondale Mills (Ala.)	90	95
Belton Mills (S. C.)	100	103
Bibb Mfg. Co. (Ga.)	108½	108½
Brandon Mills (S. C.)	98½	98½
Buffalo Cotton Mills (S. C.) Pfd.	100	100
Cabarrus Cotton Mills (N. C.)	122	122
Chilquena Mfg. Co. (S. C.)	96	96
Clifton Mfg. Co. (S. C.)	125	125
Clinton Mfg. Co. (S. C.)	125	125
Columbus Mfg. Co. (Ga.)	93	99
Courtenay Mfg. Co. (S. C.)	125	125
Dallas Mfg. Co. (Ala.)	90	90
Darlington Mfg. Co. (S. C.)	97	97
Eagle & Phenix Mills (Ga.)	100	100
Easley Cotton Mills (S. C.)	102	102
Enoree Mfg. Co. (S. C.)	85	85
Enterprise Mfg. Co. (Ga.)	80	80
Exposition Cotton Mills (Ga.)	150	150
Gaffney Mfg. Co. (S. C.)	95	95
Granby Cot. Mills (S. C.) Pfd.	97½	97½
Granvilleville Mfg. Co. (S. C.)	100	100
Greenwood Cotton Mills (S. C.)	99	102
Grendel Mills (S. C.)	100	103½
Henrietta Mills (N. C.)	200	200
King, John P., Mfg. Co. (S. C.)	80	88
Lancaster Cotton Mills (S. C.)	100	110
Lancaster Cotton Mills (S. C.) Pfd.	100	100
Langley Mfg. Co. (S. C.)	80	80
Laurens Cotton Mills (S. C.)	170	170
Lockhart Mills (S. C.)	95	95
Louise Mills (N. C.)	100	100
Louise Mills (N. C.) Pfd.	100	100
Manchester Cotton Mills (S. C.)	90	90
Marlboro Cotton Mills (S. C.)	105	110
Mayo Mills (N. C.)	170	170
Mills Mfg. Co. (S. C.)	90	90
Mills Mfg. Co. (S. C.) Pfd.	100	100
Monarch Cotton Mills (S. C.)	95	95
Monaghan Mills (S. C.)	99	102
Newberry Cotton Mills (S. C.)	120	120
Norris Cotton Mills (S. C.)	107	107
Olympia Cotton Mills (S. C.) Pfd.	98	98
Odel Mfg. Co. (N. C.)	98	102
Orangeburg Mfg. Co. (S. C.) Pfd.	102	102
Orr Cotton Mills (S. C.)	100	102
Pacolet Mfg. Co. (S. C.)	105	110
Pelzer Mfg. Co. (S. C.)	165	170
Piedmont Mfg. Co. (S. C.)	175	180
Poe, F. W., Mfg. Co. (S. C.)	141	141
Richland Cotton Mills (S. C.) Pfd.	37½	37½
Roanoke Mills (N. C.)	98	102
Saxon Mills (S. C.)	100	102
Siber Mfg. Co. (S. C.)	95	95
Southern Cotton Mills (S. C.)	95	95
Spartan Mills (S. C.)	135	140
Trion Mfg. Co. (Ga.)	125	150
Tucapau Mills (S. C.)	142	142
Union Cotton Mills (S. C.)	155	155
Union Cotton Mills (S. C.) Pfd.	102½	102½
Victor Mfg. Co. (S. C.)	125	133
Warren Mfg. Co. (S. C.)	100	101½
Warren Mfg. Co. (S. C.) Pfd.	106	110½
Washington Mills (Va.)	10	20
Washington Mills (Va.) Pfd.	90	101
Wilmington Cot. Mills (N. C.) Pfd.	100	100
Wiscasset Mills (N. C.)	118	118
Woodruff Cotton Mills (S. C.)	95	97½

Advices from New Orleans say that the plan of affiliation of the Germania National Bank and the Interstate Trust & Banking Co. provides that the two corporations shall remain separate, but with practically the same stockholders and directors, though with different officers. The bank, it is stated, will continue its business along the same lines in its present quarters, while the trust company will transfer to it its general banking accounts and business. The Germania Bank will then turn to the trust company all savings and safe deposit business, as well as other business demanding the facilities of a trust company. It is further noted that there will not be any changes in the officers of either institution.

Mr. Calvin T. Davidson, president of the Davidson Chemical Co. of Baltimore county, Maryland, died early on Satur-

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day last at the Union Protestant Infirmary in Baltimore. Mr. Davidson organized the Davidson Chemical Co., of which he was president. The company has works at Canton and Hawkins Point. Representatives of the various fertilizer companies of Baltimore, Md., held a meeting on Tuesday last at the Merchants' Club. Mr. W. H. Grallin was selected as chairman, and Mr. Thomas H. Roberts, secretary. A committee composed of Messrs. J. K. Ober, A. W. Tancy and R. H. Brewster was selected to draft resolutions of regret on the death of Mr. Davidson.

Representatives of the two large packing houses recently beginning operations at Fort Worth, Texas, report that they could use many more cattle, hogs and sheep than come to that market.

[For Additional Financial News, See Pages 30 and 31.]



**Hambleton & Co.****BANKERS and BROKERS,**

Members New York and Baltimore, Stock Exchanges.

**17 S. Calvert St., BALTIMORE.**

High-grade Investment Bonds, Municipal, Railway, Industrial.

Letters of Credit Available Everywhere.

**CONDENSED STATEMENT OF THE  
First National Bank of Richmond, Va.**

JUNE 9, 1903.

**RESOURCES.**

Loans and Discounts	\$3,561,733.73
U. S. Bonds at par	612,500.00
Overdrafts	40.75
Other Stocks and Bonds	412,607.78
Banking House and other Real Estate	60,742.73
Cash and Due from Banks	903,196.76
	\$5,542,521.69

**LIABILITIES.**

Capital	\$600,000.00
Surplus and Profits (net)	552,240.76
Reserved for Interest	7,659.72
Circulation	593,500.00
Deposits	3,380,622.31
U. S. and Va. Bond Account	408,600.00
	\$5,542,521.69

**Calvin N. McAdoo**

Banker and Broker,

**GREENSBORO, N. C.**

MEMBER

New York Cotton Exchange.

New Orleans Cotton Exchange.

Consolidated Stock Exchange.

Private Wires to all Exchanges.

Southern Securities a Specialty.

Jacob Phinizy, Pres. Chas. G. Goodrich, Cash.  
Hamilton H. Hickman, Vice-Pres.**Georgia Railroad Bank,****AUGUSTA, PA.**Capital, \$200,000.00 Undivided Profits, \$201,585.63  
Commenced Business December 31, 1892.

Members Baltimore Stock Exchange.

**J. WM. MIDDENDORF & CO.****BANKERS AND BROKERS,****Continental Trust Bldg.****Baltimore, Md.**

Stocks and Bonds Bought and Sold on Commission. Special attention given to Municipal and other Investment Loans. Dealers in Foreign Exchange. Drafts on Europe and Letters of Credit furnished. Private Wire to New York and Richmond.

**Merchants' & Farmers' Nat. Bank****CHARLOTTE, N. C.**

Capital, \$200,000. Surplus and Profits, \$75,000.

Prompt and intelligent attention to all business entrusted to us. Correspondence invited.

Dr. J. H. McAden, Pres. Geo. E. Wilson, V. Pres.  
C. N. Evans, Cash. W. C. Wilkinson, Asst. Cash.  
N. Y. Correspondent:  
SEABOARD NATIONAL BANK.**Spencer Trask & Co.****BANKERS**

William &amp; Pine Sts., New York

**Investment Securities.**

Members New York Stock Exchange.

Branch Office, Albany, N. Y.

**Savannah Trust  
Company,**

13 Bay St., East, SAVANNAH, GA.

Capital, \$500,000.

Executes trusts of every description.  
Accepts deposits and allows interest  
on daily balances.  
Collections promptly handled.WM. W. MACKALL, GEO. J. BALDWIN,  
President. Vice-President.  
WM. V. DAVIS, Secretary and Treasurer.**JOHN L. WILLIAMS & SONS,****BANKERS,**

Dealers in RICHMOND, VA.

**Southern Investment Securities**

MUNICIPAL BONDS A SPECIALTY.

Correspondence Invited.

**EDWARD H. THOMSON & SONS,****Bankers and Brokers,**

10 South Street, BALTIMORE.

Members of Baltimore Stock Exchange.

Dealers in High-Class Securities.

Collateral Loans Negotiated.

**MARYLAND TRUST CO.**

N. W. Cor. Calvert and German Sts.

**BALTIMORE.**

CAPITAL, - - \$2,125,000.00

SURPLUS, - - 2,437,500.00

**A LEGAL DEPOSITORY FOR COURT  
AND TRUST FUNDS.****SAFE DEPOSIT BOXES FOR RENT.**Acts as Financial Agent for States,  
Cities, Towns, Railroads, and other  
Corporations. Transacts a General  
Trust Business. Lends money on ap-  
proved security. Allows interest on  
special deposits. Acts as Trustee under  
Mortgages, Assignments and  
Deeds of Trust; as Agent for the  
Transfer or Registration of Stocks  
and Bonds and for the payment of cou-  
pons, interests and dividends.J. WILLCOX BROWN, President.  
HENRY J. BOWDOIN, First Vice-Pres.  
LLOYD L. JACKSON, Second Vice-Pres.  
ALLAN McLANE, Third Vice-Pres.  
CARROLL VAN NESS, Sec. and Treas.  
L. S. ZIMMERMAN, Asst. Sec. & Asst. Treas.**DIRECTORS.**J. Willcox Brown, Henry Walters,  
Wm. A. Marburg, H. A. Parr,  
Lloyd L. Jackson, B. N. Baker,  
Geo. A. von Lingen, Andrew D. Jones,  
H. J. Bowdoin, James Bond,  
Joshua Levering, John A. Tompkins,  
W. B. Brooks, Jr., Clayton C. Hall,  
John S. Wilson, Josiah L. Blackwell,  
Fred'k W. Wood, George C. Jenkins,  
Seymour Mandelbaum, John Pleasants,  
Leopold Strouse, L. F. Loree,  
J. Southgate Lemmon,**Hugh MacRae & Co.****Bankers,**

MISCELLANEOUS SOUTHERN SECURITIES,

**COTTON MILL STOCKS**

WILMINGTON, N. C.

WASHINGTON, D. C., (Kellogg Building.)

**International Trust Co.**

OF MARYLAND.

**BALTIMORE.**

Capital, - - \$2,000,000.00

Surplus and Profits, \$1,550,660.12

**OFFICERS:**DOUGLAS H. GORDON, President.  
J. WM. MIDDENDORF, } Vice-Presidents.  
EDWARD H. THOMSON, }  
CHAS. D. FENHAGEN, Sec. and Treas.  
WALTER D. FOCKE, Asst. Sec. and Treas.**Executive Committee:**SAMUEL C. ROWLAND, Chairman,  
Sec. and Treas. American Lumber Company;  
Pres. National Bank of Port Deposit, Md.  
SUMMERFIELD BALDWIN, of  
Woodward, Baldwin & Co., Wholesale Dry  
Goods Commission Merchants;  
Director National Exchange Bank.  
RICHARD H. EDMONDS, President and Editor  
Manufacturers' Record.  
J. WM. MIDDENDORF, of  
J. Wm. Middendorf & Co., Bankers & Brokers;  
Vice-Pres. Seaboard Air Line Railway.  
EDWARD H. THOMSON, of  
E. H. Thomson & Sons, Bankers and Brokers;  
Director Merchants National Bank.  
DOUGLAS H. GORDON, President.We respectfully solicit correspondence  
with Banking Institutions and Corpora-  
tions desiring the services of a well-  
equipped Trust Company.**4 % Certificates  
of Deposit.**Due March 1, 1908.  
Interest payable quarterly.**Coupon Certificates of \$1000 each.**The above certificates are engraved,  
in coupon form, issued to bearer, with  
provision for registration of Principal,  
in denominations of \$1000 each, interest  
at four per cent. per annum, payable  
March, June, September and December.  
The holder of these certificates, by  
giving sixty days' notice in writing, can  
obtain payment of principal on any  
interest date.

ISSUED BY

**The Continental Trust Co.****BALTIMORE.**

Capital and Surplus, \$5,340,000.

Interest paid on deposits subject to check.

Largest Capital of Any Bank or Trust Company in the  
South Atlantic States.**RICHMOND TRUST**

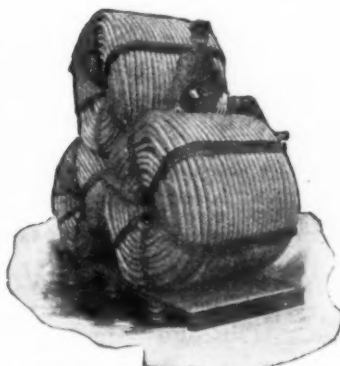
AND

**SAFE DEPOSIT COMPANY.**

N. W. Corner 10th and Main Streets. RICHMOND, VA.

**CAPITAL, \$1,000,000**Does a general Trust Company bus-  
iness. Acts in all Fiduciary capacities.  
Receives deposits and allows interest  
thereon.President, - - JOHN SKELTON WILLIAMS,  
Vice-Presidents, - - JAMES H. DOOLEY,  
HENRY L. CABELL,  
Treasurer, - - LEWIS D. CRENSHAW, Jr.

CORRESPONDENCE INVITED.

**MANILA=SISAL=JUTE CORDAGE**THE AMERICAN MFG. CO., 65 Wall Street, New York,  
makes everything in this line from a small India Twine to an  
18" Turned Hawser. They are the largest fibre workers in  
the world."American" Transmission Rope, 2" dia.,  
coils 2500 ft. long without splice.**"AMERICAN" TRANSMISSION  
ROPE**

is standard

Every Mill Owner, Superintendent and En-  
gineer should have a copy of "A Little Blue  
Book on Rope Transmission." A postal  
card will bring it

**New Corporations.**

The Bank of Clarendon has begun business at Manning, S. C.

A new bank is to be opened at Crofton, Ky., with \$15,000 capital, by A. B. Croft and others.

It is reported that a national bank, with \$300,000 capital, is being organized at Tampa, Fla.

The Hazard State Bank, capital \$25,000, has been organized at Hazard, Ky.; cashier, D. Y. Combs.

The First National Bank has been authorized to begin business at Yorkville, S. C.; O. E. Wilkins, president; R. C. Allen, cashier.

A new bank is being organized at Honea Path, S. C., by R. M. Sherry, to begin business about October 15; capital about \$25,000.

The American Realty & Finance Co., capital \$100,000, has been incorporated at St. Louis by William P. Cole, E. R. Brown and W. A. Denver.

The First National Bank of Dickson, Tenn., has been authorized to begin business; capital, \$25,000. Pitt Henslee, president; S. E. Hunt, cashier.

The First National Bank of Cowgill, Mo., has been authorized to begin business; capital \$25,000; James Cowgill, president; J. W. Myers, cashier.

The State National Bank is being organized at Dallas, Texas, with \$250,000 capital, by J. W. Blake of Sherman, John H. Reagan of Palestine and others.

The Shawnee Loan & Investment Co. of Shawnee, O. T., capital \$100,000, has been incorporated by William L. Peck, Charles T. Reichert and H. E. Shaffer.

The Atoka Trust & Banking Co., has been incorporated at Atoka, I. T.; capital \$50,000. The directors are John G. Long, C. Stevens Avery and C. H. Matthews.

The Miles National Bank of Miles, Texas, capital \$25,000, has been authorized to begin business; Henry Wilks Robinson, president; Arthur Howard Lewin, cashier.

The Choctaw-Chickasaw National Bank of Durant, I. T., has been authorized to begin business with \$50,000 capital. F. M. Pirtle is president, and I. B. Walker, cashier.

The Burmah State Bank of Burmah, O. T., capital \$10,000, has been incorporated by C. O. Leeka, O. E. McCartney of Graves, O. T., and J. W. Wamban of Burmah.

The Amite Bank & Trust Co. has begun business at Amite City, La.; capital \$100,000. It has a branch at Independence, and will establish another branch at Tangipahoa.

The First National Bank of Kerens, Texas, capital \$25,000, has been approved. The organizers are Travis Holland, Kerens, Texas; W. S. Price, Wm. Noble, T. S. Daniel and S. J. Jennings.

It is reported that a new banking company, with \$1,000,000 capital, is being organized at Wheeling, W. Va., by Wheeling and Pittsburg capitalists. It is proposed to erect a ten-story building.

The First National Bank of Byars, I. T., capital \$25,000, has been approved. The organizers are S. L. Williams, N. H. Byars, T. T. Ellridge, Maggie J. Morris, C. J. Walterhouse and J. P. Bailey.

Subscriptions have been received for a new national bank at Middlesboro, Ky.; capital \$50,000. Virginia interests, it is reported, will also establish the Bank of Middlesboro at that place in September.

The Bank of Custer City of Custer City, O. T., has been chartered, with \$10,000 capital. The incorporators are C. O. Leeka of Independence, O. T.; Henry Stoddard and Frank Stoddard of Blackwell.

The American National Bank of Bartlesville, I. T., capital \$25,000, has been

approved. The organizers are H. N. Cook, Minnie Cook, V. D. Eberwein, Charles Stuart, Fred P. Spraul and C. A. Cook.

The First National Bank of Dry Ridge, Ky., capital \$30,000, has been approved. The organizers are W. T. S. Blackburn, T. J. Browning, D. A. Frank, J. A. Bracht, J. N. Young, Perry Simpson and others.

The Bessemer National Bank of Bessemer, Ala., capital \$100,000, has been approved. The organizers are R. F. Smith, Edward H. Lopez, Thomas F. Robinson, Turner R. Fulton and Vincent Ferguson.

The P. W. Lee Loan Co. of Falls Church, Va., has been chartered, with capital of \$5000 to \$25,000. The incorporators are P. W. Lee, president; Bruce McIntosh, J. E. Failing, Julius Graham and J. B. Paxson.

The new bank at Donalds, S. C., capital \$25,000, is reported organizing, with the following officers: President, W. K. Stringer; vice-president, R. A. Lewis; directors, W. K. Stringer, R. A. Lewis, W. R. Dunn, J. J. Dunn, R. L. Barnore and S. O. Harvey. Cashier not yet chosen.

The American Insurance Co. of Little Rock, Ark., a mutual concern to insure against fire, lightning, cyclones, etc., has been incorporated by M. B. Sanders, president; J. T. Hughes, vice-president and auditor; E. Miles, secretary; Charles E. Shoemaker, treasurer; G. A. Kimberley and Joseph Rvssli.

W. L. Dodd and W. H. Ady of Birmingham, Ala., will, it is reported, establish at Louisville, Ky., a new life insurance company, with a capital of \$100,000. It is also stated that J. A. Dodd and R. P. McDavid of Birmingham and Dr. Edward Decker and George Buck of Baltimore will also be interested.

The Provident Accident Insurance Co. of Wheeling, W. Va., has been incorporated to purchase and continue the business of the Provident Life Insurance Co. of Charleston, W. Va.; capital \$100,000. The incorporators are J. McMassters, J. A. Miller, W. A. Wilson, D. E. Stalnaker and Alfred Paull of Wheeling, W. Va.

The People's Bank of Ocilla, capital \$25,000, has been chartered at Ocilla, Ga. by J. W. Paulk, J. E. Howell, J. L. Paulk, J. C. Luke, R. V. Paulk, J. G. Lewis, C. Harper, Henry Paulk, G. J. Paulk, J. A. Paulk, D. R. Henderson, J. B. Paulk, J. R. Paulk, M. Paulk, M. C. Sapp, T. M. Paulk, W. M. Smith, L. R. Tucker, M. G. Hogan, D. H. Paulk and J. E. Walker of Irwin county, J. M. Ashley of Coffee county, C. E. Vinson of Chatham county, and W. A. Little, W. C. Phillips and W. H. Little of Wilcox county.

The National Bank of Commerce, capital \$300,000, has been organized at San Antonio, Texas, to begin business between September 15 and October 1. The officers are J. P. Barclay, president; R. L. Ball, vice-president; John M. Bennett, Jr., assistant cashier. The position of cashier has not yet been filled. The board of directors also include Charles Schreiner of Kerrville, R. J. Kleberg of Corpus Christi, J. M. Bennett, Sr., W. J. Moore and George R. Stumberg. The bank will occupy the first story of the Kampmann building.

The Burnet National Bank has been organized at Burnet, Texas; capital \$25,000. Among those interested are H. Harding, cashier of the Fort Worth National Bank; O. S. Houston, president of the Caldwell National; G. H. Stein, cashier of the City National Bank of Kansas City, Mo.; W. H. Fegun, president of the Amarillo National; Felix Bath, C. W. Howard and W. L. Smallwood of

**FISK & ROBINSON**  
**BANKERS**

Government Bonds

and other

Investment Securities

MEMBERS NEW YORK STOCK EXCHANGE

35 CEDAR STREET 28 STATE STREET  
NEW YORK BOSTON**Wanted:**Chesapeake & Ohio Canal,  
Sixes, Defaulted Bonds.**TOBEY & KIRK,**

25 Broad St., New York.

Established 1873.

J. Wm. Middendorf, Pres. A. H. Rutherford, Treas.  
E. L. Williams, Vice-Pres.  
Howard P. Page, Sec. and Auditor.  
E. L. Bemis, General Manager,  
Office of Gen. Mgr., Richmond, Va.**Railways & Light Co. of America,**EXECUTIVE OFFICES:  
CONTINENTAL TRUST BUILDING,  
BALTIMORE, MD.Finances, Builds, Purchases Electric Railways,  
Electric Lighting Properties, Waterworks, Ice  
Plants, Etc. Examinations made and reports  
furnished on all classes of industrial properties.  
CORRESPONDENCE SOLICITED.**APPRAISAL & AUDIT CO. OF AMERICA.**

Teutonic Bldg., CHICAGO.

Audits and Examinations of Books and Accounts. Devisers of Successful  
Accounting Systems. Appraisers of all classes of Property. Plans and  
Specifications of Buildings and Machinery. Send 10c. in stamps  
for book, "SYSTEM OF APPRAISAL & AUDIT."**WE FINANCE AND BUILD**

Electric Railways, Power Stations, Water Powers, etc., etc.

**WE BUY**Railway Charters and Franchises, ALSO Small Issues of  
Railway, Mining and Industrial Bonds.

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**The Mechanics Electric Co.**

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170 Summer St., BOSTON, MASS.

**THE AUDIT COMPANY OF NEW YORK**

EXAMINATIONS.

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Investigations for Financing and Underwriting  
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Chicago,  
New York Life Building.

Mutual Life Buildings, 43 Cedar Street.

Philadelphia,  
Arcade Building.**WHEN ABOUT TO  
INCORPORATE**Write for fourth edition of  
"Pointers on Delaware Cor-  
poration." Official forms,  
estimates of cost and copies  
of the amended law.**DELAWARE TRUST COMPANY**

WILMINGTON, DELAWARE.

**HENRY W. THOMSON,**  
Spartanburg, S. C.**STOCK AND BOND BROKER,**Southern Cotton-Mill Stocks a Specialty.  
CORRESPONDENCE SOLICITED.**J. P. HORNADAY & CO.**Electric Railway, Water Works, Light,  
Traction, Industrial and Mineral  
Properties and Securities  
Bought and Sold.

Suite No. 1108 Traction Bldg. CINCINNATI.

**SURETY BONDS.****Fidelity and Deposit Co.**

OF MARYLAND.

Home Office, - BALTIMORE, MD.

Assets Over \$5,000,000.

Pioneer Surety Co. of the South.  
Becomes Surety on Bonds of every de-  
scription.

AGENTS IN ALL PRINCIPAL CITIES.

HARRY NICODEMUS, Sec'y and Treas. EDWIN WARFIELD, President.

**Guaranteed Storage Receipts Issued**For property stored on your own premises or in  
Public Warehouses. Also for Property stored  
in the warehouses of this Company.All Receipts GUARANTEED by the FIDELITY  
& DEPOSIT CO. of Md.A HIGH CLASS COLLATERAL—Accepted in  
all money markets.**Baltimore Fidelity Warehouse Co.**

BALTIMORE, MARYLAND.

ALBERT G. OBER, President.

T. E. WITTERS, Sec'y. &amp; Mgr.

THOS. L. BERRY, Treasurer

**AGENCIES:**

Equitable Trust Company, Augusta, Ga.

American Trust &amp; Banking Co., Atlanta, Ga.

Other agencies will be established where needed.

Correspondence Solicited.



Fort Worth, and others. The board of directors consists of Messrs. Howard and Houston and Early J. Moses and F. P. Green of Burnet.

The State National Bank is being organized at Dallas, Texas, with \$250,000 capital, says a letter received by the Manufacturers' Record from Mr. A. C. Wilson of New Iberia, La. A number of prominent Texas bankers will be interested in the new institution, which will probably be open about October 15. J. W. Blake, formerly president of the Grayson County National Bank at Sherman, Texas, will be president of the new institution, and A. C. Wilson, formerly with the First National Bank of Waco, Texas, and at present secretary of the New Iberia Milling Co. at New Iberia, La., will be assistant cashier. The other officers have been selected, but their names will not be given out until later.

#### New Securities.

Winnsboro, Texas.—Winnsboro has issued \$15,000 of school bonds.

Dawson, Ga.—The city has voted \$20,000 of bonds for a new school.

Waco, Texas.—The city has voted to issue \$600,000 of 4 per cent. water bonds. Hallettsville, Texas.—Lavaca county has issued \$25,000 of road and bridge bonds.

Asheville, N. C.—The Weaver Power Co. of Asheville has issued \$125,000 of bonds.

Bay City, Texas.—The commissioners' court has issued \$60,000 of road and bridge bonds.

Jefferson, Texas.—The city has voted \$15,000 50-year 4½ per cent. bonds for water-works.

Sterling City, Texas.—Sterling independent school district has registered \$2000 of school bonds.

Columbus, Ga.—The Columbus Showcase Co. has filed a mortgage to secure \$15,000 of 6 per cent. bonds.

Paris, Texas.—The city has voted to issue \$75,000 of water supply improvement bonds. T. S. Hill is mayor.

Birmingham, Ala.—A resolution has been adopted by the city council providing for an election to vote on high-school bonds.

Alexandria, La.—Bids will be received until 4 P. M. September 14 for \$28,000 of 5 per cent. street bonds. Thomas Crawley is mayor.

Houston, Texas.—The Texas & New Orleans Railway Co. proposes to issue \$1,800,000 of additional bonds on the Dallas-Sabine division.

Powell, W. Va.—The Powell Coal & Coke Co. has issued \$150,000 of bonds.

West Point, Va.—West Point has voted to issue \$15,000 of water bonds.

Raleigh, N. C.—Seasongood & Mayer of Cincinnati have accepted the \$20,000 of 20-year 5 per cent. bonds issued by Wake county to refund the floating debt.

Austin, Texas.—The State Treasury has made the final payment of \$100,000 on an issue of \$500,000 of Bexar county road bonds, purchased by the State Board of Education. Payment was made in silver, and it is stated five wagons were required to take the money to the bank.

#### Financial Notes.

The Canal Bank of New Orleans has applied for an amendment to its charter changing its name to the Canal Bank & Trust Co.

A dispatch from Norfolk, Va., reports that the City National Bank, with \$200,000 capital, will be absorbed by the National Bank of Commerce, with \$500,000 capital.

The Continental Trust & Savings Co. of Fort Worth, Texas, is reported to have purchased the Farmers and Merchants' Bank, a private concern, at Boyd, Wise county, Texas.

As will be seen by an advertisement in another column, Messrs. Tobey & Kirk, 25 Broad street, New York, wish to purchase Chesapeake & Ohio canal 6 per cent. defaulted bonds.

The bond election, which was to have been held at Moultrie, Ga., on August 23, was called off by action of the city council. It was proposed to issue \$35,000 for sewers and \$15,000 for a new academy.

The stockholders of the Teutonia Bank of New Orleans have approved the plan to change its name from the Teutonia Bank to the Teutonia Bank & Trust Co., and to increase its capital from \$100,000 to \$200,000.

The executive committee of the Oklahoma Bankers' Association is to meet at Guthrie on September 4 to arrange for the annual convention, which is to be held at Guthrie in November. About 100 New York bankers are expected to attend the convention.

#### For Bonded Cotton Warehouses.

At the annual meeting at Macon of the Georgia Cotton-Ginners' Association Mr. J. F. McGowan advocated the bonded warehouse plan as a regulator of the cotton trade. He said:

"The producer and consumer are agreed on this theory, but the practicable means of accomplishment are lacking. Such practicable means may be separated into two divisions, the financial and the physical, i. e., the money and the warehouses. Given the warehouses without the money, and no good could be accomplished; given the money, and the warehouses would soon follow. The money exists because the cotton is being taken care of on its own merits. Why is it the cotton must be put into warehouses, principally in Europe, in order that the money may be found to take care of it? Why is the money not willing to take care of the cotton at or near where it is produced? There is no sound reason to be advanced why this should not be done.

"At the time when there was little cotton consumed in the United States it was a minor importance whether the cotton was moved to Europe in the month of October or later; it had to go there eventually to be manufactured. From this and other causes it then became customary for cotton to move out of the South as rapidly as it was ready for market. Since these conditions and these customs came into existence conditions have changed materially, while customs have remained practically unaltered, the change in the conditions being that first the Eastern States took up the manufacture of cotton, and later the Southern States, until we now have reached the period where the United States is consuming over 4,000,000 bales of cotton annually.

"The laws of State and commerce which fitted well enough the conditions that existed twenty-five years ago must be readjusted in order to bring about such a change in the custom as will fairly and reasonably meet the conditions now confronted. Let the laws of our State be made so exact and rigorous that the integrity of a warehouse receipt issued under these laws would be above question, and the result would be that money could be found, probably the same money that is now taking care of American cotton in warehouses elsewhere, willing to take care of cotton in warehouses in Georgia."

The association elected Messrs. W. D. Hammock of Coleman president; A. J. Baldwin of Dawson, vice-president, and C. C. Hanson of Atlanta, secretary-treasurer.

#### A Week at Cape May—Special Excursion Tickets via Pennsylvania Railroad, Covering Accommodations at Principal Hotels.

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Johnstown.....	30 00
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Lancaster.....	20 40
Wilkesbarre.....	23 50
Pottsville.....	20 74
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Pottstown.....	18 60
Phoenixville.....	18 08
Norristown.....	17 65

Proportionate rates from intermediate points. Tickets will be good going on any regular train, and will have a liberal return limit. The seven days' accommodations at the above-mentioned hotels must begin on either August 31 or September 1, and will cover the choicest portion of the season at this delightful resort. For additional information apply to nearest ticket agent.

#### Reduced Rates Account Salvation Army Camp Meeting, Summit Grove.

Excursion tickets to New Freedom and return will be sold by the Pennsylvania Railroad Co. at reduced rates from stations on the Baltimore division of the Northern Central Railway, on account of the Salvation Army Camp Meeting at Summit Grove (near New Freedom).

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Blackely, A. R., & Co., Ltd.	1	Dearborn Desk Co.	31	Florida Electric Co.	53	Latrobe Steel Co.	13	Peck-Hammond Co.	20	Waters, John A., & Co.	10
Blacklee Mfg. Co.	16	Delaware Corporation Co.	31	Florida Electric Co.	53	Latrobe Steel Co.	13	Peck-Hammond Co.	20	Watkins, Frank M., Mfg. Co.	10
Blanke, Ewald G.	6	Delaware Trust Co.	30	Florida Electric Co.	53	Latrobe Steel Co.	13	Peck-Hammond Co.	20	Watson, Benjamin.	39
Blythe, Richard A.	38	DeLoach Mill Mfg. Co.	49	Florida Electric Co.	53	Latrobe Steel Co.	13	Peck-Hammond Co.	20	Watson, E. E.	34
Boiles, J. E., Iron & Wire Wks.	45	Detroit & Buffalo Steamboat Co.	24	Florida Electric Co.	53	Latrobe Steel Co.	13	Peck-Hammond Co.	20	Watson-Sullivan Co.	41
Boomer & Boschert Press Co.	37	Detroit Graphite Mfg. Co.	28	Florida Electric Co.	53	Latrobe Steel Co.	13	Peck-Hammond Co.	20	Webster & Co., Warren.	10
Boston & Maine Railroad.	40	Detroit Lubricator Co.	31	Florida Electric Co.	53	Latrobe Steel Co.	13	Peck-Hammond Co.	20	Weir Frog Co.	12
Boston Belting Co.	24	Diamond Drill & Mch. Co.	25	Florida Electric Co.	53	Latrobe Steel Co.	13	Peck-Hammond Co.	20	Wells Light Mfg. Co.	1
Bourne-Fuller Co.	3	Diamond State Steel Co.	58	Florida Electric Co.	53	Latrobe Steel Co.	13	Peck-Hammond Co.	20	Westbrooks, J. B., Fdy. & Mch. Co.	10
Bourse, The.	2	Dimnick Pipe Co.	53	Florida Electric Co.	53	Latrobe Steel Co.	13	Peck-Hammond Co.	20	Western Electrical Supply Co.	59
Bowen & Street Equipment Co.	35	District of Columbia Charter Co.	31	Florida Electric Co.	53	Latrobe Steel Co.	13	Peck-Hammond Co.	20	Western Supply & Mfg. Co.	39
Bowen, Homer.	31	Dixon, Jos., Crucible Co.	60	Florida Electric Co.	53	Latrobe Steel Co.	1				



## PROPOSALS.

### When Competitive Bids are Wanted

from first-class firms, these columns are invaluable in reaching engineers, architects, builders and contractors on railroad construction (steam and electric), water works, sewerage, electric light plants, municipal improvements, buildings and all public franchises and utilities throughout the entire country. Rate—20 cents per line per issue.

When the next regular issue of the Manufacturers' Record is too late for quick bids, the Daily Bulletin of the Manufacturers' Record will bring immediate results, as it is published every business day in the year, reaching many of the leading engineers, contractors, manufacturers and others, North, East, South and West.

W. D. Arthur, Secretary of the Carnegie Library Building Committee, Union, S. C., who inserted in these columns an advertisement for designs for the Carnegie Library to be erected in Union, says:

"The results of the advertisement were very satisfactory."

Jno. C. Stanfield, Supervisor Washington County, Holston, Va., who advertised in the proposal columns of the Manufacturers' Record for bids on the steel bridge across the Holston River, Va., writes in regard to the results obtained from this advertisement, as follows:

"My advertisement in your paper was entirely satisfactory. I had twelve bidders from the different States, and, in my opinion, I thought this was a good representation of the bridge builders of the country. I will most heartily endorse your paper as the one to advertise in."

**TREASURY DEPARTMENT**, office of the Supervising Architect, Washington, D. C., August 22, 1903.—Sealed Proposals will be received at this office until 3 o'clock, P. M., on the 8th day of September, 1903, and then opened, for the installation of an elevator plant in the United States Court House and Postoffice at Minneapolis, Minn., in accordance with the drawings and specification, copies of which may be had at this office at the discretion of the Supervising Architect, JAMES KNOX TAYLOR, Supervising Architect.

**SEALED PROPOSALS** will be received until 12 o'clock noon, September 15th, 1903, by the City of Greenville, Mississippi, addressed to Wm. Verger, City Clerk, for furnishing material and labor necessary to construct, approximately, 30,000 square yards of brick pavement. The principal items are 30,000 square yards of brick pavement and concrete foundation, 10,000 lineal feet stone curbing. Each bid must be accompanied by a certified check for \$500, payable to the City Clerk. Plans and specifications are on file at the office of the City Engineer. Contractors are invited to submit their own plans and specifications with sealed bid for same. The right to reject any and all bids is reserved.

WM. VERGER,  
Clerk City of Greenville.

### WATER WORKS FRANCHISE.

HOUSTON, TEXAS, August 14, 1903.

Sealed proposals addressed to D. D. Bryan, City Secretary of the City of Houston, Texas, will be received up to 12 o'clock noon Monday, Sept. 14, 1903, for a twenty-one year franchise for a water works plant to be located in the City of Houston, Texas. The plant must be adequate for the needs of a growing city with a population now estimated at 70,000, and must be constructed with the view to furnishing good, pure water, and at such a price as will compensate the city for the franchise to be granted.

Bidders will indicate what compensation they will be willing to give in consideration for the franchise, and what concession they will allow in the way of water rates.

The city reserves the right to reject any and all proposals.

D. D. BRYAN, City Secretary.  
O. T. HOLT, Mayor.

### COUNTY JAIL.

**SEALED PROPOSALS** will be received by the Commissioners of Brunswick County, at their office in Southport, N. C., until 2 o'clock P. M., Monday, September 28th, 1903, for the construction of a County Jail with steel cells. Plans and specifications can be obtained from the Clerk of the Board of Commissioners, or can be seen at his office.

M. C. GUTHRIE,  
Chairman County Commissioners.  
Southport, N. C., August 21st, 1903.

**TREASURY DEPARTMENT**, Office of the Supervising Architect, Washington, D. C., August 15, 1903.—Sealed proposals will be received at this office until 3 o'clock P. M. on the 22d day of September, 1903, and then opened, for the construction (including heating apparatus and electric wiring and conduits) of the United States Postoffice at Martinsville, Va., in accordance with the drawings and specification, copies of which may be had at this office, or the office of the Postmaster at Martinsville, Va., at the discretion of the Supervising Architect, JAMES KNOX TAYLOR, Supervising Architect.

**TREASURY DEPARTMENT**, office of the Supervising Architect, Washington, D. C., August 20, 1903.—Sealed proposals will be received at this office until 3 o'clock, P. M., on the 23d day of September, 1903, and then opened, for the installation of a conduit and electric wiring system for the United States Postoffice at Joplin, Mo., in accordance with the drawings and specifications, copies of which may be obtained at this office, or at the office of the Superintendent of Construction at Joplin, Mo., at the discretion of the Supervising Architect, JAMES KNOX TAYLOR, Supervising Architect.

**TREASURY DEPARTMENT**, Office of the Supervising Architect, Washington, D. C., August 25, 1903.—Sealed proposals will be received at this office until 3 o'clock P. M. on the 29th day of September, 1903, and then opened, for the installation of a conduit and electric wiring system for the U. S. Court House, Post Office and Custom House at Tampa, Florida, in accordance with the drawings and specification, copies of which may be obtained at this office or at the office of the Superintendent of Construction, at the discretion of the Supervising Architect, JAMES KNOX TAYLOR, Supervising Architect.

**FORT MYER, VA., Aug. 17, 1903.**—Sealed proposals, in triplicate, for addition to hospital will be received until 10 A. M., September 1, 1903. The United States reserves right to reject or accept any or all bids, or any part thereof. Information on application. Envelopes containing bids should be indorsed "Proposals for Addition to Hospital," addressed Capt. R. Harrison, Q. M.

### PROPOSALS FOR TUNNEL.

**PROPOSALS** for driving drainage tunnel on the property of the Consolidation Coal Company through the measure underlying the Pittsburgh bed will be received by the undersigned up to September 10, 1903. Tunnel will be about 11,000 feet long, 7 feet high and 8 feet wide. Maps, profiles and specifications can be seen at the company's office, Frostdorph, Maryland.

B. S. RANDOLPH, Mining Superintendent.

### NOTICE TO CONTRACTORS.

CHARLESTON, S. C., August 1, 1903.

The trustees of the James S. Gibbs Art Gallery, viz.: Judge Charles H. Simonton and Mayor J. Adger Smyth, invite sealed proposals for the erection and completion of an Art Gallery in the City of Charleston, S. C., agreeable to the plans and specifications on file with J. H. Dingle, City Engineer, Charleston, S. C., and at the office of the Architect, Frank P. Milburn, Columbia, S. C.

Each contractor will file with his bid a certified check on some well-known bank for the sum of \$2000, made payable to the trustees, as evidence that if his bid is accepted he will enter into contract at once, and give an acceptable Guarantee Company's bond in the sum of \$25,000 for the faithful performance of the contract.

Should the successful contractor fail to file the bond required within twenty days, his check will be forfeited as liquidated damages by reason of the delay.

For more detailed information see plans and specifications.

Bids must be filed with Architect FRANK P. MILBURN, Columbia, S. C., on or before August 29th, 1903.

The trustees reserve the right to reject any or all bids.

### PITTSBURG METER CO.

MAKERS OF

### WESTINGHOUSE GAS METERS

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1 1/2-yd. L. G. Crane Trac. Shovel, new.  
1 1/2-yd. L. G. Spec. Trac. Shovel, new.  
1 1/2-yd. Vul. Giant D Special, 1901.  
Western all steel Road Scraper, new.  
New Era Sr. Steel Level Grader, 3 rolls.  
65 1-way 3-yd. Bloomsburg Dump Cars, 3 rolls.  
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4 miles nearly new 30-lb. Angle Joints & Frogs

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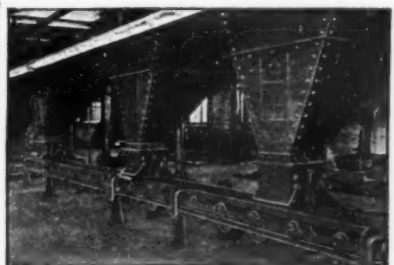
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Purchaser with wood working plant can readily establish a profitable business.

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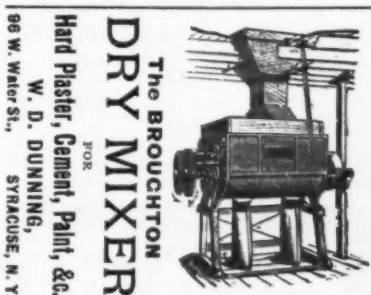
Ash Hoppers, Valves and Conveyor in the Basement of Mt. Royal Pumping Station.

WRITE FOR CATALOG 0011.

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A great deal of these lands are valua-  
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3000 acres in Braxton County on survey  
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1000 acres in Randolph County on  
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Other coal lands in Upshur County.  
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46 Feet Head and Fall at

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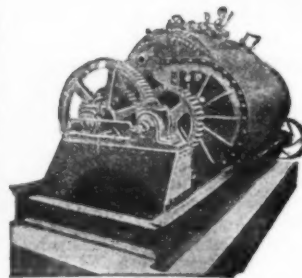
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Write us for what you want to buy.

**Valdosta Foundry & Machine Co.**  
VALDOSTA, GA.

## BOILERS!

Engines, Machinery in great variety at  
LOW PRICES.

Correspondence solicited by  
**FIDELITY MACHINE AND METAL COMPANY,**  
1408-22 Washington Ave., Phila.

## FOR SALE.

One Lodge & Shipley lathe, 18 in x10 ft.  
0 in. 6 months old; used about 4 days.  
One No. 11 Union Drop Forge Com-  
pany's oil furnace, new. Address  
**CHESAPEAKE IRON WORKS,**  
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Second-hand Dynamos, Motors and  
Electrical Appliances. All money sav-  
ers. Repair anything. Have you a  
Dynamo or Motor for sale?

**GUARANTEE ELECTRIC CO.**

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## ENGINES.

- 2 24-44x48 tandem compound Cooper Corliss.
- 1 20-36x48 tandem compound Hamilton Cor-  
liss, right-hand, wheel 22' diam. x 56" face.
- 1 20-36x42 tandem Fitchburg.
- 1 13-30x16 Westinghouse.
- 1 13-34x48 cross compound Cooper Corliss.
- 4 16-32x48 tandem compound Cooper Corliss.
- 1 16-27x16 Westinghouse.
- 1 16-28x18 tandem Erie Ball.
- 1 16-26x17 tandem McIntosh & Seymour.
- 1 15-25x16 Erie Ball cross compound.
- 1 15-23x17 tandem McIntosh & Seymour.
- 1 14-25x16 Ball & Wood cross compound, self-  
contained.
- 1 14-23x16 tandem Ames.
- 1 14-24x14 Westinghouse.
- 1 13-22x13 Westinghouse.
- 2 13-23x18 tandem Williams.
- 1 13-19x15 tandem McIntosh & Seymour.
- 1 8 1/2-12x14 tandem McIntosh & Seymour.
- 1 36x72 Corliss, 50-ton wheel.
- 1 28x60 Allis, 1890 frame.
- 1 24x48 Hamilton Corliss.
- 1 24x48 tandem Hamilton Corliss.
- 1 22x42 Harris Corliss.
- 1 21x18 Armstrong & Sims.
- 1 18x48 Knowlson & Kelly Corliss.
- 1 18x48 Allis Corliss.
- 1 18 1/2x18 McIntosh & Seymour.
- 2 16x16 Ball & Wood.
- 1 15 1/2x24 Buckeye, tangye frame.
- 1 14 1/2x24 Buckeye, tangye frame.
- 1 14x16 Safety, New York Power Co.
- 2 13x18 Harrisburg Ideal.
- 1 11x12 McIntosh & Seymour.
- 1 9 1/2x10 Armstrong & Sims.
- 1 9x12 Ball.

## BOILERS.

- 1 250 H. P. Babcock & Wilcox, water tube.
  - 1 175 H. P. Sterling, water tube.
- These boilers are practically new.

**Rossiter, MacGovern & Co., (Inc.)**

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## MENGEL'S MACHINERY EXCHANGE

15 H. P. Geyser Portable Boiler and Engine on  
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H. P. Baxter Engine and Boiler combined. 55 H.  
P. White & Middleton Gas or Gasoline Engine,  
12" by 36". 60 H. P. Hamilton-Corliss Engine,  
directly connected to 25-ton Linde Ice Machine.  
5 and 10-ton Vertical Compressors. 4 25 and 35  
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Copper Starch Kettle. 60-light Dynamo. 25 110  
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Printing Presses. Paper Cutters. Complete  
Plants and Machinery of all kinds Bought, Sold  
and Exchanged.

Mengel's Mach'y Exchange, 12 E. Lombard St., Baltimore Md.

## Corliss Engine.

We have for immediate delivery  
one 23"x48" L. H. Harris-Corliss  
Engine (300 H. P.), in first-class working  
order. It was used only a  
short time in a cotton mill.

For detailed information and price  
write

**The Cameron & Barkley Co.**

CHARLESTON, S. C.

## FOR SALE.

75 K. W. direct connected set.  
115 volts, excellent condition,

**J. C. M. LUCAS,**

22 Light Street, BALTIMORE.

**THORNHILL WAGON CO.,**

At Lynchburg, Va., have for sale a 35 horse power  
Engine, in good condition, second hand. Will  
sell cheap.

## Wood-Working Machinery.

Band Saw, 30", J. A. Fay.  
Band Re-Saw, 42x3, Williamsport.  
Fan, double, fine condition, 36".  
Jig Saw, nearly new, Rogers.  
Jointer, Buss automatic, 6' 6".  
Jointer, Smith, 19", slotted head.  
Lathes, Egan Back Knife Lathe, 54"x2 1/2".  
Lathes, Wood, 16 to 20".  
Matchers, Tompkins, 24", 3 sided.  
Moulders, 7", 4 sided, Rowley & Hermance.  
Planer, Buss, 30x8.  
Railway cut-off Saw, J. A. Fay.  
Re-saw, circular, 42", Segment Egan, fine con-  
dition.  
Sander, 24", invincible.  
Saw arbors and saw tables.  
Swing saws, new, \$35.00.  
Tenoner, D. E. D. H. & C. C. B. Rogers.  
Tenoner, Buss double end, 9", stock.  
Chain hoist, one or two ton.  
Leather belting.  
Gasoline engines, all sizes.  
42" 3-drum Columbia sander.

**PRICE MACHINERY CO.**

507 Great Northern Bldg.

CHICAGO, ILL.

We have just secured several large man-  
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to dispose of the contents  
which are principally

**Boilers, Engines, Lathes,  
Planers, Milling Machines,  
Shapers, Screw Machines,  
Drill Presses, Slab Millers,  
Open-Side Planers and  
Machine Tools in General.**

Send for list and get prices.

**Girard Machine & Tool Co.**

491 N. 3d Street,

PHILADELPHIA, PA

## FLOUR MILL MACHINERY.

**ROLLER MILLS—Double Stands.**

One 6x12, three 6x18, three 9x18 Case.  
One 9x24, one 9x14 Allis.  
One 9x24 and one 9x30 Todds & Stanley.

**IRON FRAME VERTICAL FRENCH  
BUHR MILLS.**

Two 30" Harrison, two 20" Sprout, Waldron,  
Three 18" Richmond, one 17" Sprout, Wal-  
dron.

**WOOD FRAME HORIZONTALS.**

One 22" Bradford, and one each, 18", 24",  
30" and 36" Straub.  
Stock constantly changing. Write for what  
you want.

**STRAUB MACHINERY CO.,**

Cincinnati, Ohio.

## FOR SALE.

1 1/4-yard Marion Shovel, New York  
delivery, \$3000.

Two (2) complete Contractors' Plants,  
Steam Shovels, Locomotives and  
Dump Cars, Pennsylvania delivery.  
Ready for immediate delivery.

Write or wire

**Jno. T. Driscoll & Co.**

13 McCormick Block, CHICAGO, ILL.

## FOR SALE.

### Boilers.

Two 70 H. P. Hor. Return Tubular. Two  
65 H. P. Locomotive. One 25 H. P. Loco-  
motive. One 25 H. P. Vertical. One 20  
H. P. Vertical. One 10 H. P. Vertical.

### Engines.

One 7x8 Vertical. One 10x12 Horizontal.  
One 12x24 Horizontal. One 12x28  
Horizontal. One 14x24 Horizontal. One  
18x24 Horizontal. One 10x14 "Buckeye"  
Automatic. One 13x15 "Ide" Automatic.  
One 15x18 "Ide" Automatic. Two 10x12  
"Ball" Automatic.  
Also a lot of Pumps, Hoisting Engines,  
Motors, Rails, Pipe, Wood Working Ma-  
chinery, Shafting, Hangers, Wood and  
Iron Pulleys.

ALL AT BARGAINS.

**Huntington Machinery & Supply Co.**  
WILKES-BARRE, PA.

## FOR SALE.

Immediate Delivery.

### AIR COMPRESSORS.

Two Rand Straight Line, "Class C," 18"x18"x24".  
One Ingersoll-Sergeant, Class "G," Duplex, 20"  
x20 1/2"x24".  
One Norwalk (2 stage) 14"x14"x20 1/2"x16".  
Two Rand Duplex (3 stage) 16"x14"x20 1/2"x4 1/2"  
x22".  
One Rand Duplex Corliss, 20"x20"x36".

### BOILERS.

Four Babcock & Wilcox Water Tube, 208 h. p.  
each, shaking grates.  
Eight Horizontal Return Tubular, 66"x16".  
Three Horizontal Return Tubular, 72"x12".  
Four Horizontal Return Tubular, 72"x16".  
Three Horizontal Return Tubular, 60"x16".  
Nine Horizontal Return Tubular, 72"x18".

### ENGINE.

One 20"x40" Buckeye, girder frame, band wheel  
in half, 12"x31" face.

### LOCOMOTIVES.

36" gauge Locomotives.  
Four H. K. Porter 9"x14", saddle tank.  
Two Vulcan 9"x14", saddle tank, built 1900.

### RAILS.

200 tons 30-lb. steel relayers.  
200 tons 35-lb. steel relayers.  
500 tons 56-lb. steel relayers.

### CARS.

Eighty 80,000-lb. Ore Hopper Cars, made by  
Allison Mfg. Co.

### PUMP.

1 Worthington Compound Duplex Condensing  
Pump, 25"x43"x17 1/2"x36", 20" suction and 18"  
discharge. Capacity, 3,000,000 gallons.  
All of the above in A-1 order and ready for  
immediate delivery.

We buy and sell Air Compressors, Engines,  
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purchased.

### Steam Street Motor Car.

Baldwin standard gauge, compound cylinders.  
Only four years old, weight 60,000 pounds. Cost  
new, \$5900. For quick acceptance will be sold  
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### BOILER STACK.

1000 feet of 34" Boiler Stack, 5-16" material. This  
stack is first-class in every respect and will be  
sold at a bargain.

### CYLINDER BOILERS.

8 Boilers, 40' long x 34" diam., good for 100 lbs.  
steam pressure, without fixtures or fittings. For  
quick sale will be sold cheap.

### A. V. KAISER & CO.

222 South Third St., PHILADELPHIA, PA.

### ENGINES.

One 18x42 Harris-Corliss Engine.  
One 16x20 S. C. Washington Iron Works' Engine  
self-contained.  
One 13x22 S. C. Cardwell Engine.  
One 11x18 S. C. Talbot Engine, Box-bed.  
One 14x16 S. C. Engine.  
One 11x15 Richmond Locomotive Works' S. C.  
One 11x14 A. & C. C. C. Engine.  
One 7x8 Vertical Engine.  
One 6 H. P. Vertical Engine.  
One 4 H. P. Vertical Engine.  
One 20 H. P. Farquhar Traction Engine.  
One 15 H. P. Aultman & Taylor Traction Engine.  
One 12 H. P. Birdsall Traction Engine.  
One 10 H. P. Frick Engine and Boiler mounted  
on wheels.

### BOILERS.

One 80 H. P. High-Pressure R. T. Boiler, good  
for 120 lbs. steam working pressure.  
One 80 H. P. R. T. Boiler.  
One 70 H. P. R. T. Boiler.  
One 60 H. P. R. T. Boiler, Half-Front.  
One 50 H. P. R. T. Boiler, Full-Front.  
One 50 H. P. Economic Boiler.  
One 40 H. P. Economic Boiler.  
One 40 H. P. R. T. Boiler, Half-Front.  
One 25 H. P. R. T. Boiler, Half-Front.  
One 20 H. P. R. T. Boiler, Half-Front.  
One 15 H. P. Locomotive Type Boiler on wheels.  
One 30 H. P. Vertical, and several smaller sizes.  
Also several sizes of pumps and other machinery.  
The above are in A-1 condition. Write for  
particulars.

**Jno. A. Waters & Co., Richmond, Va.**

## FOR SALE.

Fifty Whitin Welman Top Flat Cards,  
with 40 tops 40 ins. wide. Cylinder 42  
x40 ins. Doffer 40x18 ins. Floor space  
3 ft. 2 ins. x5 ft. 2 ins., with coils.  
Production 125 lbs. per day. Some of  
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**WM. J. DUNN,**

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**Feed Water Heater.**

One Goubert horizontal, closed, 800 H. P. heater,  
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ceived from factory, never used. A great bargain  
at special price offered. Address

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## FOR SALE.

**Two Pairs 16x20 Link Motion Engines.**

Can be used for Hoisting  
Purposes.

**CHAS. T. LEHMAN,**

BIRMINGHAM, ALA.

## LATHES.

- No. 73 14"x15" Lodge & Shipley.  
No. 73 14"x15" Lodge & Shipley.  
No. 49 20"x10" Taper, Lodge & Shipley.  
No. 47 20"x15" Lodge & Shipley.

### THE LODGE & SHIPLEY MACHINE TOOL CO.

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## FANS.

Central station man's opportunity to increase the day load. We offer for immediate delivery, all f. o. b. Cincinnati, the following 125 cycle fans:

- 150 G. E. swivel and turn, 12 in., 104 volt., \$5.00 each.  
150 Emerson solid, 12 in., 52 volt., \$3 each.  
200 Westinghouse solid, 13 in., 52 volt., \$3.50 each.  
100 G. E. swivel and turn, 12 in., 52 volt., \$4.00 each.

JOHN A. STEWART ELECTRIC CO.

430 Sycamore St., Cincinnati, Ohio.

## FOR SALE.

- 50 H. P. Engine, side crank, self-contained, 12x18 cylinder, flywheel 66" diameter, 14" face; all appurtenances, built by Casey & Hedges, Chattanooga, Tenn., and none better made. In use about three years, with best care.
- 25 H. P. Boilers, Scotch marine, return tubular, stacks 25", 30" diameter; all appurtenances and pipe connections. Built by Casey & Hedges, and none better built. In use about three years, with best of care.
- Worthington Prospecting or Sinking Pumps, 4 1/2"x2 1/2"x4", steam pipe 1/2" discharge 1 1/2" suction 3", capacity 3000 gals. of sandy, gritty water. In fine condition.
- Centrifugal Pump, 3" discharge, 2 1/2" suction. Made by Thos. Williamson, Hockessin, Del. A splendid pump, in fine condition.
- Flory Hoisting Engine, cylinder 3/4", friction drum 10" diameter, 16" long. Capacity 900 lbs., with single line.
- Horse Power Hoisting Drums, with automatic safety attachment. Made by Thos. Carlin's Sons, Allegheny, Penn.
- Fairbanks Trussed Lever Scales, Platform 10' x 9' 1/2", capacity 25,000 lbs.
- Fairbanks Portable Scales, capacity 1000 lbs. large platform for barrows.
- Also a large lot of Pulleys, 6" to 36" diameter and 6" to 28" face, iron and wood split.
- Belt, Chesapeake brand, 25' to 52' and 4" to 14" wide.
- Rubber, 12, 13 and 18" long, 6" face.
- Also, complete machinery for washing clay.
- Imhauser Watchman's Time Detector, 10 stations.

**KAOLIN MANUFACTURING CO.**  
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One 18x24 Pittsburg Locomotive. Six Drivers. Weight 42 tons. Condition good. Price \$3500.00. Immediate shipment.

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- 12 Western Wheeled Scrapers.  
10 Drag Scrapers.  
4 Western Railroad Plows.  
2 Rooter Plows.  
1 two and one-half ton Ames Disc Roller.

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## FOR SALE.

- 1-54 in. x 12 ft. horizontal tubular boiler.  
1-12x30 horizontal engine.  
1-7 and 14x10 fore and aft marine engine.  
6 steam pumps—all sizes.

**E. J. CODD CO.,** Baltimore, Md.

## BARGAINS—CHEAP.

One Deane Duplex Comp. Pump, 14x20x11x18.  
One 30x13 Blake Pattern Crusher, nearly new.  
Three Hoisting Engines. Rails, Locomotives.

**L. E. KENNEDY & CO.**  
17 Broadway, New York City.

### FOR SALE.

#### Partial List Second-Hand Machines

- 18"x15" Pratt & Whitney, rise and fall rest, with taper.  
14"x14" Putnam, rise and fall rest.  
14"x16" Prentiss, rise and fall rest.  
15"x16" Blaisdell, rise and fall rest, with taper.  
15"x16" Poeter, rise and fall rest.  
15"x16" Prentiss, rise and fall rest, with taper.  
18"x18" Pratt & Whitney, rise and fall rest, with taper.  
18"x17" M. H. & O., plain rest.  
18"x10" Fay & Scott, compound rest.  
18"x18" Reed, plain.  
18"x18" Lodge & Davis, compound rest and taper.  
24"x10" No Name, incomplete.  
26"x18" Betts Lathe, compound rest.  
30"x18" Stark, plain.  
36"x14" Betts Lathe, compound rest.  
No. 2 B. & O. Turret.  
No. 14 Garvin Special Forming Turret Lathe.  
14"x16" Lodge & Barker Turret Lathe.  
16"x16" Johnson Turret Lathe.  
18"x16" Lodge & Davis Chucking Lathe.  
Six-Spindle Miles, Bement & Co. Arch Bar Drill.  
26" Bickford Upright Drill.  
20" Barnes Upright Drill.  
Three-Spindle Upright Slide Sensitive Drill.  
Three-Spindle Garvin Sensitive Drill.  
24"x24"x6" Sellers Planer, one head.  
42"x42"x10" Whitcomb Planer, two heads.  
42"x42"x18" Betts Planer, one head.  
16" Smith & Mills Shaper.  
No. 2 Keyseat Milling Machine.  
No. 2 Garvin Plain Milling Machine.  
No. 1 B. & S. Universal Milling Machine.  
No. 4 1/2 Garvin Plain Miller.  
No. 3 Garvin Plain Miller.  
2 No. 2 Garvin Plain Millers.  
1 No. 4 1/2 Brainard Plain Miller.  
No. 4 Schlenkers Double-Head Bolt Cutter.  
2" Pratt & Whitney Cutting-Off Machine.  
12" Lowell Machine Co.'s Slotter.  
Double-Head Pratt & Whitney Horizontal Boring Mill.  
Cold Saw, 19" Blade, Pump and Pan.  
30" Springfield Knife Grinder.  
Wells Bros. Cutter and Reamer Grinder.  
Springfield Tool Grinder, 36" Wheel, with pump.  
2 Speed Lathes.  
4 35 H. P. Portable Boilers.  
1 Blacksmith Bellows.  
Also a complete line of new machines. Correspondence solicited.

**Brown & Zortman Machinery Co.,**  
Pittsburg, Pa.

### 2ND-HAND TOOLS.

- Lathes.**  
16 in. x 8 ft. Field.  
20 in. x 4 ft. New Haven.  
27 x 14 Geo. Place, heavy.  
28 x 18 ft. Fay & Scott.  
17 Stewart Speed Lathe.  
16 in. x 8 ft., comp. rest, Lowell.  
Axle Lathes, Bement (2).
- Planers.**  
24 in. x 4 ft. heavy, Leeds.  
30 x 8 Flatner.  
36 x 8 Wheeler.  
24 in. x 24 in. x 7 ft. New Haven.
- Shapers.**  
16 in. Geared, Western.  
18 in. Ohio, crank.  
22 in. Prentiss-Juengst Friction.
- Drills.**  
Ceiling, 3 ft. arm, Radial.  
Ceiling, Boilemakers.  
30 in. Prentiss Bros.
- Screw Mch.**  
No. 60 Garvin, 1/4 in., with wire feed.  
Garvin Hub Mch., 4 1/2 in. hole.
- Grinders.**  
No. 2 Surface, Universal Co.'s.  
24 in. x 18 ft. Springfield Surface.
- Wood Working.**  
No. 1 Greenlee, Auto. R. B. Cut-off Saw.  
16 in. Goodell & Waters Planer, 1 1/2 in.  
Frybair Planer and Joiner.  
Ex. heavy 4 side Timber Planer and seven other machines.
- Miscellaneous.**  
Sq. Arbor Gage Fox Lathe.  
50 lb. Blue Drop Hammer.  
20 lb. Merrill Drop.  
Oil Separator, American.  
No. 1 B. & S. Univ. Miller.  
No. 2 P. & W. Screw Slotter.  
13 in. Bement Slotter.  
10 H. P. N. Y. Safety Engine, etc., etc., etc.

Write your requirements.  
**G. L. BENNETT, 113 Liberty St., New York.**

## FOR SALE. Immediate Delivery.

- One Westinghouse Standard Engine, 11x11 Est. H. P. 60.  
One Westinghouse Standard Engine, 11x10 Est. H. P. 60.  
One Slide Valve Engine, 10x12, Est. H. P. 30.  
Two Return Tubular Boilers, each 60"x18", Est. H. P. 80 each.  
Two Smith-Vaile Single Hydraulic Pumps, 12x1 1/2 x14.

The above machinery is in good order and was in operation up to April 30th, when it was taken out on account of enlargement and changes in our steam plant and other machinery equipment.

Address  
**NORTH CAROLINA COTTON OIL CO.**  
CHARLOTTE, N. C.

### WANTED TO PURCHASE.

One 8 1/2 in. by 10 in. double cylinders and double drum hoisting engine with-out boiler.

Address,  
**P. O. BOX 798,**  
New Orleans, La.

Highest prices paid for Dynamos, Motors and Electrical Apparatus of any description.

Complete Stations purchased. Write us for full descriptions and get our cash offers.

**J. W. KOHN & CO.**  
14 Merwin St., Cleveland, O.

### FOR SALE.

A 4 cutter, Seaman carving machine in good order. One Benedict bed clamp.  
**LUGER FURNITURE CO., Minneapolis, Minn.**

## For Sale—Machinery.

Hoisting engines, pile drivers, steam dredges, steam shovels, locomotives, dump cars, flat cars, relaying rail, engines, boilers, pumps, air compressors, rock drills, channelers, stone crushers, concrete mixers, road rollers, grading and ditching machines, wheel scrapers, traveling derricks, cableways, wire cable, etc. Send for list of bargains in machinery just issued.

**WILLIS SHAW,**  
710 New York Life Building, Chicago.

### BARGAINS FOR QUICK DELIVERY.

- No. 2 Gates Crusher.  
No. 3 Gates Crusher.  
No. 5 Style B, Gates Crusher.  
Double column Drop Hammer, cylinder 14"x36", fine order.  
Good Second-Hand Engines.  
12-ton Kelly Roller, fine as new.  
New Well Drilling Machine, cheap.  
Marion AA Shovel, fine condition.

### WE SELL

Engines, Boilers,  
Pumps and Quarry  
Supplies,  
Concrete Mixers,  
Horse Rollers,  
Steam Drills,  
Air Compressors,  
Belting, Hose,  
and a full line of  
Contractors' Supplies.

**CONTRACTORS' SUPPLY & EQUIPMENT CO.,** 232 Fifth Avenue, CHICAGO.

## GAS ENGINE.

We have for sale an 80 H. P. Standard two cylinder Engine, specially designed for Electric Light use.

Engine is practically new and price very low.

**THE F. BISSELL CO.,** 150 Huron St., Toledo, Ohio.

## Machinery Bargains.

### Second-Hand—Good Condition.

Vertical Boilers to 40 H. P., Hor. Tub. Boilers to 30 H. P., Locomotive Boilers 20, 60, 100 H. P., Westinghouse Engine 25 H. P., Chandler & Taylor auto. high speed 8x10, Hor. plain slide valve engine to 25 H. P., Steam pumps all sizes, lot large valves.  
Wood Mortisers, Boring machines, Gray & Wood planers, 26x6 and 26x12 double surfacers, Swing Saw, Jig Saw, Variety Moulder, 16" Fox Lathe, 16" Spinning Lathe, 5 speed lathes, 10" Sc. Cutting Lathe, 8" Boynton Shaper.

### NEW MACHINERY.

10" to 26" Screw Cutting Lathes, 20" to 28" Drill Presses, Power Hack Saws, Emery Grinders, Buffalo Forges, 2 1/2, 5, 7 1/2 H. P. Gas Engines, 3 to 15 H. P. Vertical Engines, 12 to 30 H. P. Auto. High Speed Engines.  
Shafting, Hangers, Pulleys, Belting, etc. Pipes, Valves, Fittings, the largest stock in the South. Write what you want or have to sell.

**J. D. MALLORY,**  
BALTIMORE, MD.

### FOR SALE.

- 1 300 H. P. Cross compound Slater engine, \$3000.  
1 18x42 Harris Corliss, overhauled, \$1500.  
1 12x35 Corliss, overhauled, \$750.  
1 12x18 Skinner engine, \$300.  
1 34x72 George Corliss, with balance wheel, \$6.00 per H. P.  
1 30x72 George Corliss, with balance wheel, \$6.00 per H. P.  
1 34x48 Woodruff & Beach, automatic, \$500.  
1 20x60 George Corliss engine, \$1200.  
1 10x24 Ryder, automatic, \$150.  
1 6x8 Fitchburg, vertical, \$85.  
1 iron stack, 52x36, \$150.  
1 Corliss, segment wheel 16x60" face.  
1 hydraulic press, 8" rams, 48x36" platens.  
1 300 to 400 H. P. quill, practically new, including boxes.  
2 tanks, 9' diameter, 8' deep, 3/4 shell, \$85 each.  
1 400 H. P. Berryman heater, \$150.  
1 100 H. P. Berryman heater, \$75.  
1 75 H. P. National heater, \$50.  
1 75 H. P. National heater, \$50.  
Lot of pulleys, 6' to 16' diameter.  
1 400 H. P. Knowles jet condenser, \$350.  
1 250 H. P. Deane condenser, \$200.  
5 72"x18" H. R. T. boilers, first-class condition, without fittings, \$200 each.

**F. H. DAVIS & CO., 53 State St., Boston, Mass.**

## Baker, Stillwell & Hart

Manufacturers' Agents,

Room 421 Chalfoux Building,  
**BIRMINGHAM, ALABAMA.**

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|---------------|-------------------|---------------|
| Pig Iron,     | Rails,            | Fire Brick,   |
| Bar Iron,     | Nuts and Washers, | Babbitt Metal |
| Coal,         | Bolts,            | Tool Steel,   |
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| Steel Shapes, | Foundry Supplies, | Boilers,      |
| Cars,         | Car Wheels,       | Castings,     |
- Second-hand Machinery of all kinds.

### FOR SALE.

1 18x42" Left Hand Harris Corliss Engine. Thoroughly Repaired. GUARANTEED good as new.

**CLYDE MACHINE WORKS,**  
39th St. and Union Ave. CHICAGO, ILL.

## MONEY SAVERS IN Second-Hand Boilers and Engines.

There are several propositions here that should interest you. Some are mentioned below. Others quite as good are omitted from the list. Anything here that appeals to you? Write anyhow and ask about whatever you may require.  
Two 75 H. P. Continental Boilers, 100 lbs.  
One 40 H. P. Marine Firebox Boiler, 100 lbs.  
Three 40 H. P. Return Tubular.  
One 50 H. P. Return Tubular.  
One 54x12 Return Tubular.  
One 4 H. P. Upright Boiler and Trimmings.  
One 75 H. P. Firebox Boiler, 110 lbs.  
One 1000 H. P. Corliss Engine.  
One 300 H. P. Meyers Engine.  
One 40 H. P. Murray Iron Works Engine.  
One 20 H. P. Dutton Hor. Engine and Trimmings.  
One 20 H. P. Raming Hor. Engine.  
One 18 H. P. Watertown Hor. Engine & Trimg's.  
One 10 H. P. Upright Engine.  
One 30 H. P. Lambert Gasoline Engine.  
One 20 H. P. Otto Gasoline Engine.  
One 65x6 3" Discharge Double Acting Steam Pump. And many others.

**D. GRUPE & SONS, Davenport, Iowa.**

### FOR SALE.

- 1 22x52 R. H. Watts Campbell Corliss Engine.  
1 10x12 Ideal Automatic Engine.  
1 10x7x10 Worthington Duplex Pump.  
1 15 ton Road Roller for sale or rent.  
1 Little Giant Steam Shovel.  
1 10x7x10 Worthington Duplex Pump.  
Iron Tanks, 300 to 1000 gallon capacity.

**JAS. S. BRADEN, 26 Cortlandt St., New York.**

### FOR SALE CHEAP.

Several Dynamos, Motors, Engines, Boilers, Pumps, Steam Traps, Damper Regulators, Iron Pulleys, Shafting, Etc. Practically good as new. Get our figures before buying elsewhere. We can beat 'em all on prices.

**American Electric Supply & Mfg. Co.**  
27 Thames St., New York City.

### FOR SALE.

- 1 65 ton Vulcan steam shovel.  
1 50 ton Vulcan steam shovel.  
1 9x14, 36" gauge, saddle tank, contractors locomotives.  
1 30 ton 4 wheel, standard gauge, saddle tank locomotives.  
4 American type, 35 ton, standard gauge locomotives.  
1 Baldwin consolidation, standard gauge, 50 tons.  
25 yd. two-way standard gauge, steam frame Western dump cars.  
5 36" gauge 2 1/2 yd. swing dump cars.  
25 36" gauge 3 yd. side dump cars.  
1 9x15 Climax crushing plant, complete with engine and boiler.  
1 12x24 Climax crushing plant, complete with engine and boiler.  
2 New Era graders, complete with traction engine.  
1 Western spreader, mounted on standard gauge car.

If you want to buy or sell contractors' plant of any description, we can help you. Correspondence solicited.

**CONTRACTORS EQUIPMENT CO.**  
1124 Betz Bldg., Philadelphia, Pa.

We have **FOR SALE** at  
**CROWN POINT, N.Y.**

- 1 Smoke Stack, 8' diameter, 130' high, self supporting.  
3 Hartman Stoves, complete, 66"x16".  
3 Hartman Stoves, complete, 46"x15".  
1 9"x15" Farrell Stone Crusher.  
16 Cylinder Boilers, 36"x41".  
Air Tanks and Receivers from blowing engine.

**HENRY A. HITNER'S SONS,**  
Huntingdon St. and Aramingo Ave., Philadelphia.



# OUR BARGAIN PAGE.

Our prominence has been gained by selling material at big money-saving prices.

The business of the CHICAGO HOUSE WRECKING COMPANY extends today all over the world. Advertising is the only means we employ. It is, therefore, incumbent upon you to read our advertisements. Other men have profited thereby, why don't you?

Each week we knock at the doors of the "MANUFACTURERS' RECORD," and if you are not awake and alive to the importance of listening to our recitals, you are neglecting golden opportunities.

## Weddel House, Cleveland, Ohio.

We purchased this famous hostelry, including building and all contents. Our purchase includes the furnishings of 200 rooms, office, billiard hall, bar room, etc., and means that we have for sale all of the linens, bedding, cutlery, silverware, oil paintings, carpets, parlor furniture, chamber furniture, etc., etc.

Here is a class of advertising never before attempted in the columns of the Manufacturers' Record, and our reason for giving it to you is because we know you are alive to bargains of this sort, and there is hardly a man on earth but what will find bargains in this list that he can make use of, and it means that we are going to sell this material at low enough prices to interest everyone. Don't be asleep. Chances like this don't come to you every day.

### FURNITURE.

150 solid oak bedsteads, full size.  
50 folding beds.  
200 assorted marble top oak dressers with mirrors.  
200 marble top washstands to match.  
200 portable massive wardrobes with heavy plate mirrors.  
250 assorted patterns center tables.  
200 hair mattresses.  
200 box springs.  
750 all-wool blankets.  
1500 sheets.  
500 bedspreads.  
2000 feather pillows and slips.  
1000 assorted oil paintings, crayons, etc.  
200 room carpets, size from 10x14 up.  
5000 yards hall and stair carpets.  
2 massive sideboards.  
50 dining-room tables.  
250 dining-room chairs with leather seats.  
1 upright piano.  
4 handsome parlor suits.  
500 bedroom and parlor chairs, including rockers and easy chairs.  
A large quantity of marble and bronze statuary.  
25 leather couches.  
25 easy chairs.  
1 set of handsome brass andirons.  
Nickel-plated coffee urns.  
Complete kitchen apparatus, including 30-ft. range, broilers, toasters, etc.  
Silverware of all kinds.  
Napkins, table linen, etc.  
500 bell boys' jugs.  
Dishes of every kind.  
Glassware.  
Waiters' aprons and towels.  
4 roll top office desks.  
1 handsome chime, 8-day clock.  
1 6-ft. office regulator clock.  
1 set of office fixtures complete, suitable for bank or office.  
1 vault door.  
1 large fireproof safe.  
1000 shades.  
1000 pairs lace curtains.  
Draperies.  
25 hotel writing tables.  
Writing sets.  
2 poker tables.

2 buffets.  
1 lot of sample tables.  
1 large size portable refrigerator, modern; built 2 years ago.  
1 complete set of barroom fixtures.  
2 pool tables and 2 billiard tables.  
50 billiard-room chairs.  
200 wood mantels, 200 portable plate-glass mirrors.  
200 fireplaces with gas logs.  
600 cuspidors.  
12 6-light prism chandeliers with gas and electric combination; used in the dining-room.  
Also 500 various kinds of gas fixtures.  
10,000 square feet marble tiling.  
1 lot of lead-colored art glass.  
1 400-room annunciator complete with calls, push buttons, etc.  
1 cigar showcase.  
2 large cast-iron lion statues, about 4 ft. high.  
2 fire-escapes for 5-story building.  
The building material consists of the following:  
A million and a-half brick.  
500,000 ft. of lumber, consisting of joists, flooring, studding, etc.  
25,000 ft. of hardwood flooring.  
25 cast-iron bathtubs.  
50 copper tubs.  
100 assorted closets.  
150 lavatories, marble top and iron enameled.  
25 urinals and stalls.  
10,000 ft. cast-iron and wrought-iron radiation.  
1 hydraulic elevator (passenger).  
1 freight elevator complete.  
25,000 ft. standard black and galvanized wrought-iron pipe, sizes from 3/4 to 7 inch.  
2000 ft. soil pipe and fittings.  
400 doors complete with hardware; also windows.  
400 sash and frames for brick wall; 2 light.  
Sashweights of all kinds.  
200 transoms.  
Down spouting and eave troughs.  
1 complete set of laundry machinery.  
2000 ft. plate glass, ranging in sizes 4x8, 5x8, 3x8, 6x8, etc.  
200 radiator valves.  
Skylight glass.  
Stone columns, stone fronts, stone sills, etc.  
Structural iron eye beams.

In fact, everything that you see in a well-conducted, up-to-date hotel. All of this material can be inspected for the next two weeks at Cleveland, Ohio. Our representative will be at the hotel to meet prospective customers.

DIRECT ALL INQUIRIES WITH REFERENCE TO THIS MATERIAL TO OUR CHICAGO OFFICE.

### HEATING PLANTS.

We solicit inquiries for heating apparatus of every kind. Give us space to be heated and full information, and we will be pleased to quote you a proposition on a complete heating plant.

### HEATING BOILERS—FOR LOW SERVICE.

Good for 60 pounds pressure. We give you a short list of them, although we can furnish you with several others, and besides have quite a stock on hand of high-duty ones.  
787. 65x16 horizontal tubular; 38 3-in. tubes.  
698. 58x14 horizontal tubular, domeless.  
698. 58x12 horizontal tubular.  
1110. 48x8 horizontal tubular.  
X-543. Open bottom locomotive fire box, 36x12.  
2335. 64x12 horizontal tubular.  
2450. 64x16 horizontal tubular.  
2077. 44x10 horizontal tubular.  
670. 54x15 horizontal tubular.  
1645. 2 48x13 ft. 6 in. locomotive fire box.  
525. 48x16 horizontal tubular.  
1903. 48x10 horizontal tubular.  
1904. 72x20 horizontal tubular.  
1906. 72x18 horizontal tubular.  
530. 64x18 horizontal tubular.  
1173. 48x17 horizontal tubular.  
1267. 60x18 horizontal tubular.  
481. 60x16 horizontal tubular, domeless.  
1905. 2 42x12 open bottom fire box.

### HOT-BLAST APPARATUS.

1 3000 ft. Sturtevant hot-blast apparatus, complete with direct-connected engine and fan.  
1 4000 ft. Sturtevant hot-blast apparatus, complete with direct-connected engine and fan.  
1 1000 ft. belt-driven Sturtevant hot-blast apparatus.

### CAST-IRON HEATERS.

2 second-hand Barnard & Lees, 11 section. Fire box 36x22 in. Capacity 1400 ft. Price each, \$120.  
2 "Hecla" steam heaters. Capacity 1000 ft. each. Price each, \$140.  
1 "Mott" cast-iron hot-water heater, 2200 ft. Price \$200. Besides several smaller heaters.

### RADIATION.

50 pipe coils, containing from 25 to 100 sq. ft. of heating surface. Price per sq. ft. of heating surface, 14 1/2 cts.  
75 box coils, from 25 to 200 sq. ft. of heating surface in each. Price per sq. ft. of heating surface, 15 cts.  
250 pipe radiators, in heights from 18 to 54 in., containing from 22 to 225 sq. ft. each. Price per sq. ft. of heating surface, 15 1/2 cts.  
40,000 sq. ft. of cast iron second-hand radiation, all patterns, 2 and 3 column, for steam and water. Price per sq. ft. of heating surface, 17 cts.

### RADIATOR VALVES.

We offer you Jenkins disc new, nickel-plated radiator valves as follows:  
500 1 1/4 inch, without unions. Price each, 72 cts.  
350 1 1/2 inch, without unions. Price each, \$1.10.  
175 2 inch, without unions. Price each, \$1.65.  
300 1 1/2 inch, with unions. Price each, \$1.40.  
100 2 inch, with unions. Price each, \$2.  
A stock of corner radiator valves, all sizes, without unions. Discount, 90 per cent. off standard list. With unions, 85 per cent. off standard list.  
Air valves, per dozen, \$1.

### PIPE.

Our stock of good standard black second-hand pipe, with guaranteed threads and couplings, as follows:  
120,000 ft. 1 inch, per foot... 3 1/4 cts.  
40,000 ft. 2 inch, per foot... 7 1/4 cts.  
140,000 ft. 2 1/2 inch, per foot... 10 cts.  
40,000 ft. 1 inch, EXTRA HEAVY, per foot, 4 cts.  
50,000 ft. 1 1/4 inch, EXTRA HEAVY, per foot, 5 1/2 cts.  
800 ft. 8 inch, with flanges, per foot... \$ 70.  
400 ft. 10 inch, with flanges, per foot... 1.10.  
1800 ft. 12 inch, with flanges, per foot... 1.45.  
1400 ft. 14 inch, with flanges, per foot... 1.75.  
600 ft. 16 inch, with flanges, per foot... 2.00.  
200 ft. 18 inch, with flanges, per foot... 2.25.

### WROUGHT-IRON CASING.

Second-hand, THREADED ENDS AND SCREWED COUPLINGS:  
3 1/2 inch, per foot, 9 cts.  
4 inch, per foot, 12 cts.  
Fitted with EXPANDED CAST-IRON FLANGES AND BOLTS:  
2 1/2 inch, per foot, 4 1/2 cts.  
3 1/2 inch, per foot, 10 cts.  
4 inch, per foot, 13 cts.  
10,000 ft. 3 inch GALVANIZED SPIRAL RIVETED, per foot, 7 cts.

### RELAYING RAILS.

We have in stock over 20 cars of light new and relaying rails, 8, 12, 16, 20 and 25-pound. For immediate shipments can quote extremely low prices.

### BOILERS.

Our stock of boilers is the largest we have found anywhere on earth. Write us your requirements.

### ENGINES.

See list in August 6 issue.

### ROCK DRILLS.

1 1 1/4" Bullock Monarch drill, fitted for air or steam.  
4 2" Bullock Monarch drills, fitted for air or steam.  
2 2 3/4" Bullock Monarch drills, fitted for air or steam.  
4 3 1/2" Bullock Monarch drills, fitted for air or steam.  
1 U-A Sullivan for air.  
2 U-C Sullivan for steam.  
3 U-E Sullivan for steam.  
1 U-E No. 2 Sullivan for steam.  
7 2 3/4" Rand "Little Giant."  
3 3" Rand "Little Giant."  
2 3 1/4" Rand "Little Giant."  
1 2 1/2" Ingersoll for steam.  
3 3 3/4" Ingersoll for steam.  
3 3 1/2" Ingersoll for steam.  
3 3 3/4" Ingersoll for steam.  
1 Bullock Champion diamond prospecting core drill, with complete outfit, boiler and pump.  
1 Sullivan "M" diamond prospecting core drill, with complete outfit, boiler and pump.  
1 Sullivan "E" diamond prospecting core drill, with complete outfit, bit set with eight (8) pieces of carbon.

### MISCELLANEOUS MACHINERY.

1 No. 9 Sturtevant blower.  
1 No. 7 Sturtevant blower.  
1 No. 6 Sturtevant pressure blower.  
1 No. 5 Buffalo pressure blower.  
1 20x8 6-head turret lathe, hollow spindles.  
4 250 H. P. separators and purifiers.  
5 5x8 double-drum double-cylinder hoisting engines and boilers.  
7 6 1/2x8 double-drum double-cylinder hoisting engines and boilers.  
1 10x12 double-cylinder single-drum Lidget-wood, without boiler.  
1 15 H. P. combined hoisting engine and boiler.  
Foot-power lathes, all sizes. Machine tools of every description. Woodworking machinery.  
2 1/2x12x24 steam-driven straight-line compressor.  
30x24x24 National compressor.  
12x12 Snyder-Hughes belt-driven compressor.  
6x8x10 vertical compressor.  
7x8-7x8 duplex vertical compressor.  
1 7x7 Clayton.  
1 screw punch, hand-power.  
1 power milling machine.  
1 Universal gear-cutter.  
1 Universal keyseating machine.  
3 Baker blowers, 15" inlet, 15" outlet.  
1 Root blower, 10" inlet, 10" outlet.  
1 hand-power hoisting sidewalk elevator.  
1 2 1/2" Lafeil wheel.  
1 15", 16", 19" vertical drill press.  
1 wire straightener.  
1 vertical belt-driven 9-ton crane. Write for particulars.  
5 worm-gear belt-driven elevators.  
2 Reedy steam-driven elevators, 2 Crane and 1 Elthroppe.  
3 double buffing stands.  
1 belt-driven power hammer.  
1 28" slotter.  
15 belt tighteners, various sizes.  
42x3 1/2 steel tanks, smaller tanks of all sizes.  
2 12" vertical centrifugal pumps.  
1 12" horizontal centrifugal pump.  
1 12" horizontal sand pump.  
1 6" sucker.  
3 18x12x18 single Davidson pumps.  
3 16x10 1/2x10 Worthington duplex.  
Pumps of all sizes and for all duties.  
2 electric elevators, complete, with 15 H. P. Keystone motors.  
4 passenger elevator cages.  
9x16 Groton crusher, with elevator and screen complete.  
1 1000 H. P. Berryman copper-tube heater.  
1 800 H. P. Berryman copper tube.  
1 400 H. P. Erie City.  
1 300 H. P. Wainwright.  
1 250 H. P. Wainwright.  
1 150 H. P. Berryman.  
1 100 H. P. Baragwanath.  
1 50 K. W. Westinghouse alternator.  
1 50 K. W. Fort Wayne alternator.  
1 45 K. W. Edison Bi-Polar direct.  
1 30 K. W. Edison Bi-Polar direct.  
1 20 K. W. Edison Bi-Polar direct.  
1 Ingersoll-Sargeant under-cutter.

### STRUCTURAL MATERIAL.

In connection with our purchase of the Pan-American Exposition and of other large buildings, we are always in position to make prompt shipment on structural iron and steel of every kind. We issue a stock-list from time to time, which we mail on application.

CATALOGUE No. 239 for Enterprising Merchants.

# CHICAGO HOUSE WRECKING CO.

W. 35th and Iron Streets,

CHICAGO.

**FOR SALE.**

We own a choice lot of  
**RELAYING**  
**25 lb. and STEEL RAILS**  
30 lb. and Splice Bars and Spikes for same. Also a number of Frogs, and Stub and Split  
**SWITCHES.**

If you want to buy either new or re-laying Rails—any weight, or Switches, write us.

**ROBINSON & ORR,**  
419 Wood Street, Pittsburgh, Pa.

**FOR SALE.**

**Capacity, 180 16 c. p. Lamps.**

A new direct connected set, consisting of 7x7 vertical automatic engine and 10 K. W. 110 volt dynamo, 350 revolutions per minute.

Highest grade, built to U. S. Government specifications. Price, delivered to any point east of Rocky Mountains, \$675.

Photograph sent on request.

Suitable for steamboat, hotel, factory, etc.

**Goltz Engineering Co.**

127 Fulton Street, CHICAGO.

**Machinery Bargains.****Engines.**

- 1 14x22 Harris Corliss.
- 1 12x36 Greene Corliss.
- 1 12x30 Lane & Bodley Corliss.
- 1 18x24 Bates Corliss.
- 1 18x20 Watertown Automatic.
- 1 12x24 Wright Automatic.
- 1 10x12 Ball Automatic.
- 1 10x16 Atlas Automatic.
- 1 8x10 Erie City Automatic.
- 1 7x8 Gem Automatic.
- 1 10x20 Throttling Governor.
- 1 11x18 Throttling Governor, with Riding Cut off.
- Boilers.**
- 1 44x14 Half Arch Front.
- 1 54x14 Hor. Tub.
- 1 54x15 Hor. Tub.
- 1 54x12 Hor. Tub.
- 1 100 H. P. Stirling Water Tube.
- 1 10 H. P. Portable Boiler and Engine.

**Wood Working Machines.**

- 1 84" 3-Drum Royal Invincible Sander.
- 1 Heavy Boring and Mortising Machine.
- 1 Upright Mortiser.
- Saws, Planers, Tenoners, Shafting, Hangers, Pulleys, Belting.

**CLEVELAND BELTING & MACHINERY CO.**

8 Long Street, Cleveland, Ohio.

**J. E. FRANKS**

SAVANNAH, GA.

**RAILS, CARS and LOCOMOTIVES, FROGS, SWITCHES, Etc.**

**FOR SALE.**

9 Box Cars, 54 ft. long, 60,000 lbs. capacity. 1 200 H. P. Hamilton Corliss Engine. 400 tons 56 lb. and 60 lb. steel re-layers with splices. 350 ton 67 lb. steel re-layers and splices. 300 tons 30 lb. steel re-layers and splices, for South Carolina delivery. Also New Rails, 8 lbs. to 30 lbs.

**L. WOLF & BRO.,**  
50-51-52 Mitchell Bldg., CINCINNATI, OHIO.

**Engines. Boilers.**

- 9x9 Vertical Center Crank.
- 8x12 Horizontal Center Crank.
- 4 Vertical Boilers, 10, 15, 18, 25 H. P.
- 6 Hoisting Engines, various styles.
- Drill Presses and Planers.

**CONTRACTORS' SUPPLY CO.**

Park Building, PITTSBURGH.

**BOWEN & STREET EQUIPT. CO.**  
NORFOLK, VA.,  
has Removed its offices to 301-307 New Atlantic Bldg., because of increased business and consequent necessity for more office room.

**New and Second-Hand**  
**Iron Tools and Woodworking Machinery**  
Corliss and Double Valve Engines for Trolley Roads and Electric Lighting Stations.

**H. C. BAKER & CO.**  
114 N. 3d Street, Philadelphia, Pa.

**FOR SALE.**

We have over 300 assorted size Machine Tools of every description.  
Send us your wants.

**Girard Machine & Tool Co.**

191 N. Third Street, PHILADELPHIA, PA.

**FOR SALE.**—Engines—14-horse Russell traction, \$500. Twelve horse traction \$300. Thirty horse portable boiler, \$200. Fire engine, Cole Bros. make, practically new, \$500. Stationary, portable, tubular, vertical, boilers and engines all sizes. Ten horse boiler and engine on wheels, \$125. Thirty-five horse new Scotch boiler, \$300. New 20 horse engine, \$150. Slide valve engines, forty, fifty and eighty horse power. One 48" Stedman disintegrator \$250. One 3" Air Compressor, \$35. Four sawmills, 30" drill press, back geared. One hundred different machines consisting of boilers, engines, lathes, drills, heaters, pumps, at one-third their actual value.

**D. L. CASEY MACHINE CO., Springfield, Ohio.**

Portable Quarters for Contractors and Railroad Workmen. We can furnish immediate shipment of 36" gauge Box Cars in elegant condition, at prices competitive to building huts for workmen. Sanitary advantages innumerable. Such houses could be moved at completion of each contract to new field of operation. Free transportation furnished interested parties for inspection of these cars from Chicago. Have also Caboceros, Refrigerator, Stock and Flat Cars.

**Walter A. Zelnicker Supply Co., in St. Louis,**  
Branches—Chicago, New Orleans, Mobile, Houston and Seattle.

**SAW MILL.**

Seven Fay No. 2 Centennial 24-in. planers; one 32-in. Egan No. 1 automatic knife grinder; one 24-in. planer, L. Power & Co.; one 12x12 Alfree automatic engine; two 60 H. P. boilers; two 80 H. P. boilers; one 5x7 hoisting engine with boiler and drum; several thousand feet 3/4" and 1/2" steel rope, shafting, pulleys, hangers, belts; dust arrester, feed water heater, dynamo, several engines, etc. Address STONY CREEK LUMBER CO. TACOMA, WA.

**FOR SALE.**

**Kenyon Tenting and Drying Machine.**

Used only one year. In perfect order.

Address **SUMMIT PROOFING COMPANY,**  
24 Wooster St., New York.

**FOR SALE.**—One 100 K. W. direct connected "General Electric" dynamo, wound for 125 volts, 700 amperes, 250 revolutions, attached to 15 1/2"x16" "New York Safety" horizontal auto. engine in good condition; can now be seen running in the basement of the Philadelphia Bourse. Will be removed about the first of September. Will sell at a bargain for prompt delivery.

**L. F. NEYFERT'S SONS,**  
437-441 N. Third Street, PHILADELPHIA.

**FOR SALE.**

Slubber, Intermediate, Fine Frames, Drawing Frames, Spinning Frames for 1700 spindles. New, up-to-date, have not been run 12 months. Sold for no fault. Address

**UNION MFG. CO., Union P. Int., Ga.**

**FOR SALE.**

One 6x36-inch Cook's deep well pumping engine, almost new.  
One 4 H. P. Fairbanks, Morse & Co. gas engine.  
One 40x20-inch split Hill friction clutch pulley.  
Also a lot of large pulleys for which we have no use. Apply to  
**Ground Hog Plow & Foundry Co., Clarksville, Tenn.**

**FOR SALE.**

One Allis Corliss engine, cylinder 18 by 48 in. and a condenser and two 58 in. by 14 ft. boilers. All in good condition. We might consider a trade for a first-class engine about 12 by 36 in.

**DUNDAS FLOUR MFG. CO.**  
DUNDAS, MINN.

**FOR SALE.**

- 1 9x14 Locomotive 36" gauge.
- 1 10x14 Locomotive 36" gauge.
- 1 125 H. P. return tubular Boiler, 125 lbs. pressure.
- 1 150 H. P. return tubular Boiler, 100 lbs. pressure.
- 1 Blake Air Compressor, 10-20x24 low pressure.
- 1 Blake Air Compressor, 8-12x12 low pressure.

**J. C. SAXTON,**

15 Broadway, New York City, N. Y.

**FOR SALE.**

**STANDARD GAUGE PRIVATE HORSE OR STOCK CAR,** adjustable stalls for carrying sixteen heads, complete in every detail, in first-class condition. **BALDWIN STANDARD GAUGE DUMMY LOCOMOTIVE,** 9x12. Has been thoroughly overhauled and put in first-class condition.

Both of the above will be sold at a low price.

**POULTERER & CO.**

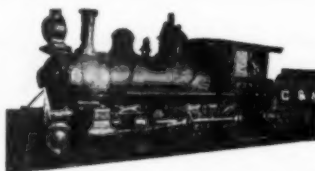
410 Bullitt Building, PHILADELPHIA, PA.

**Relaying Rails For Sale.**

IMMEDIATE DELIVERY.

250 tons 52-lb. Steel Tee Rails with Angle Plates.  
1000 tons 58-lb. Steel Tee Rails with Angle Plates, Tidewater delivery.

**GEORGE H. CAREY, 1 Broadway, New York.**

**BOWEN & STREET EQUIPT. CO.**

HAVE FOR SALE

**30 STANDARD AND NARROW GAUGE LOCOMOTIVES**

for contractors' plant, lumber and mining railways, and over 200 flat, box and logging cars, coaches and large quantities of new and second-hand rail; also Steam Skidders; low rates to all points south.

**OFFICE: 301-307 NEW ATLANTIC BLDG., NORFOLK, VA.**  
SHOPS AT Suffolk, Va.

**For Sale—Rails and Locomotives.**

One 20x24 Baldwin consolidation.  
One 19x24 American type.  
Two 15x24 American type.  
One 18x24 Mogul.  
One 16x24 Mogul.  
Three 17x22 six-wheel switchers.  
Five 12x14 Forney type.  
One 12x16 Forney type.  
One 9x14 four-wheel.  
One 12x22 four-wheel saddle tank.  
One 12x18 four-wheel, with front truck, trailing tender. All standard gauge.

**In 3-ft. gauge Locomotives we have:**  
One 12x18 Forney type.  
One 9x14 six-wheel saddle tank, with fuel tender.  
One 7x12 four-wheel saddle tank.  
One 8x16 four-wheel saddle tank.  
Also new and relaying rails of all weights. Write us for prices and terms.

**BIRMINGHAM RAIL & LOCOMOTIVE CO., Birmingham, Ala.**

**Locomotives for Sale.**

One 18x24 eight-wheel, 45 tons, first-class condition, St. Louis delivery.  
One 15x24 eight-wheel, 43 tons, just out of shops, Parsons, Kansas, or St. Louis delivery.  
One 16x22 four-wheel, 28 ton switcher, good condition, St. Louis delivery.  
One 17 ton Shay Geared Locomotive, just overhauled, Arkansas delivery.

**RAILS.**

350 tons first-class 52-lb. Steel Relays, Seligman, Mo.

**CARS.**

Two Combination Cars and two Coaches.  
One Holman Track Laying Machine.  
100 40,000 capacity Box Cars, with air brakes, good condition.  
50 40,000 capacity Refrigerator Cars, with air brakes, good condition.

**ALFRED C. REYNOLDS,**

510 Houser Building, ST. LOUIS, MO.

**NEW LIGHT STEEL RAILS.**

12 lb. to 40 lb. per yard and Splices.  
New Heavy Sections to 80 lb.  
Narrow Gauge Railway Equipment.  
Cars, Locomotives, Switches, etc.

**WONHAM & MACOR,**  
Columbia Building, NEW YORK.

**FOR SALE.**

Four miles 30-lb. Steel, with angle joints; two-thirds never used, rest lightly.  
New Heavy Crane Traction Shovel, 1 1/2.  
Western all steel Road Grader.  
New Era Sr. Steel Level Grader.

**THE MALES CO.**

256 Broadway, NEW YORK CITY.

**FOR SALE—RELAYING RAILS.**

1000 tons 40-lb. Steel Relaying Rails and Splices.  
1500 tons 58-lb. Steel Relaying Rails and Splices.  
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500 tons 63-lb. Steel Relaying Rails and Splices.  
For Prompt Shipment.

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**WANTED**—125 to 150 H.P. second hand Corliss engine. Address, giving make, age and best price, **SPRAY WOOLEN MILLS CO.** Spray, N. C.

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Two (2) Blake Compound Condensing Duplex Pumps Complete, size 14x24x24x24.  
One (1) Vertical Deep Well Pump (Dean) 18x12 x24.

One (1) Rand Drill Company Air Compressor, size 16x18x24, Meyer Valve Gear. Address

**HAUBTMAN & LOEB CO., Ltd.**

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**MANUFACTURERS****Light Steel Rails,**

12, 16, 20, 25, 30 and 35 lbs. with splices.  
Prompt delivery.

**Maryland Rail Co.**

CUMBERLAND, MD.

**SECOND-HAND****Locomotives****64 TON BALDWIN STANDARD GAUGE WITH TENDER.**

Cylinders 15x24".  
2 drivers on each side 60" diam.  
Tires 1 3/4" thick.  
Wheel base, 7' 6".  
1 set 4 wheel trucks under front end.  
No brake.

**40 TON BIG FOUR STANDARD GAUGE WITH TENDER.**

Cylinders 14x22".  
2 drivers on each side 47" diam.  
Tires 1 3/4" thick.  
Wheel base 7'.  
Steam brake.

**35 TON BROOKS MOGUL STANDARD GAUGE WITH TENDER.**

3 drivers on each side 41" diameter.  
Tires 2 9-16" thick.  
Cylinders 13/16x18".  
Air Brakes.

**6 TON RYAN & McDONALD 30" GAUGE SADDLE TANK.**

Cylinders 7 1/2x10".  
2 drivers on each side 24" diam.  
Wheel base 54".

Engines, Boilers, Pumps, Wood Working Machinery and Machine Tools of every description  
Send for complete Stock List.

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—OFFICES—

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ALSO

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**FOR SALE.****BRIDGES.**

1 50 ft. steel plate girder bridge, double track.

1 500 ft., 4 spans 125 ft. each, riveted pier bridge, double track, 24 ft. wide.  
Viaduct joining pier 570 ft. double track.

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73 80,000 lb. hopper bottom ore cars.  
100 tons 80-lb. Relaying Steel Rails.

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Aramingo Ave. and Huntingdon St.

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**17 NEW 36" gauge 30,000 lbs. capacity**

**Flat Cars**

For Prompt Shipment.

**Kilby Locomotive & Machine Works,**  
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53 tons 85-lb. New Steel T Rails and Splices.  
27 tons 75-lb. New Steel T Rails and Splices.  
15 tons 70-lb. New Steel T Rails and Splices.  
100 tons 30-lb. New Steel T Rails and Splices.  
20 tons 20-lb. New Steel T Rails and Splices.  
300 tons 16-lb. New Steel T Rails and Splices.  
50 tons 12-lb. New Steel T Rails and Splices.  
20 tons 8-lb. New Steel T Rails and Splices.  
400 tons 6-lb. Relaying. 130 tons 70-lb. Relaying  
**RICHARDSON & CO., Inc.**  
300 Ninth Street, PITTSBURGH, PA.





## MANUFACTURERS Light Steel Rails

16-20-25-30-35 and 40 lbs. per yard.

Prompt shipment on all orders.

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Mills and General Offices,  
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## RAILS 8 to 40 lb. new steel Relays, all weights. LOCOMOTIVES 8 to 60 tons, Standard and Narrow Gauge. EQUIPMENT and Supplies of all kinds.

**WESTERN SUPPLY & MFG. CO.**  
East St. Louis, Ill.

## N. Y. Elevated R. R. LOCOMOTIVES

Ready for Immediate Delivery.  
Excellent Condition.

4' 8 1/2" Gauge, Forney Type, Cylinders  
11"x14," 11"x16," 12"x16."  
Suitable for Logging Roads, Contractors, Switching, &c.

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(Coffee Exchange Bldg.)  
66 to 70 Beaver Street, N. Y. CITY.  
Steel Rails, Cars, Locomotives, R. R. Supplies.

ST. LOUIS' LARGEST SCRAP  
IRON HOUSE.

**Cohen-Schwartz Rail and Steel Co.**

Head Office and Plant: Main & North Market Sts.  
Branch Office and Yards: Foot of Mount St.  
ST. LOUIS, MO.  
Correspondence Solicited.

## LOOK THIS OVER. For Sale or Rent.

One 7x12, 42" gauge H. K. Porter 42" gauge loco.  
One 8x16, 42" gauge W. H. Bailey & Co. saddle tank locomotive.  
One 10x12 standard gauge dummy type locomotive.  
Two 16x24 standard gauge American type with 8 wheel tenders.  
One 4-ton 36" gauge loco., also several 36" gauge.  
About 25, 42" gauge 4 yard capacity dump cars, O'Connor patent.  
12 36" gauge 2 1/2 to 3 yard cars thoroughly rebuilt, good as new.  
One Worthington compound duplex steam pump, 12x18 1/2 x10 1/2 x10.  
One 25 h. p. and 12 h. p. traction engine; several boilers and engines, all sizes.  
Correspondence solicited.

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Park Row Building, New York.  
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300 tons 60 1/2-lb. steel relaying rails with angle bars, Alabama and Georgia delivery.  
900 tons 70-lb. steel relaying rails with angle bars, Ohio delivery.  
500 tons 45-lb. steel relaying rails with angle bars, Ohio delivery.  
Second-hand locomotives, coaches, steam shovels, and other railway and contracting material.

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## New Light Steel Rails,

ALL WEIGHTS,

WITH

**Track Fastenings.**

**THE STEEL RAIL SUPPLY CO.**

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## RAILS FOR SALE. Immediate Shipment.

500 tons 80-lb. Relaying Steel Rails with Angle Splices, Pennsylvania delivery.  
800 tons 60-lb. Relaying Steel Rails with Angle Splices, Indiana delivery.  
500 tons 40-lb. Relaying Steel Rails with Angle Splices, Ohio & Penna. delivery.  
700 tons 70-lb. Relaying Steel Rails with Angle Splices, Ohio delivery.  
Also NEW 16, 20, 25, 30 lb. Rails for prompt shipment.  
We BUY good Relaying Rails for cash. Write us if you have any to offer.

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## NEW RAILS.

12,500 tons New Steel T Rails,  
60, 70, or 80 lbs. per yard. July  
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## Railroad Construction.

Steam and Electric Roads  
Built and Financed.

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## FOR SALE.

Several Narrow Gauge Engines 10 to 20 tons; also standard from 40 to 60 tons. 1 16x24 Switcher in splendid condition. Stationary Boilers and Engines. 1 Perkins Shingle Machine as good as new. Agent for the Russel Wheel and Foundry Co. Cars. Also the Parker Steam Skidder.

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One 14-ton Baldwin, rear tank, standard gauge.  
Three 20-ton American type Baldwins, air brakes, 36" gauge.  
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Five Climax logging cars, 36" gauge.  
Steam shovels, hoisting engines, etc.

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And dealers in New and Second-hand Machinery. Also carry in stock Hoisting Outfits and Light Section Rail for contractors' use.

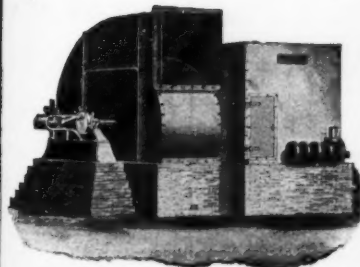
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LIGHT SECTIONS, 8 TO 40 POUND.

Special Price to Dealers.

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## STURTEVANT SYSTEM OF HEATING & VENTILATION



*Centralized plant.  
No scattered steam piping.  
Utilizes exhaust steam.  
Send for Catalogue No. 84*

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NEW YORK · PHILADELPHIA · CHICAGO · LONDON.

## LOCOMOTIVES

For all Classes of Service.

## CARS ——— COACHES

## SPECIAL

40 to 50 ton Moguls—40 to 51 inch centers.  
50 ton Baldwin Eight Wheelers.  
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30 ton Consolidations—81 inch centers.  
Passenger Coaches—excellent condition.  
Immediate delivery.

## FITZ-HUGH—LUTHER CO.

Successors to Fitz-Hugh & Co.

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Main Office, CHICAGO, Monadnock Block.



HICKS LOCOMOTIVE AND CAR WORKS.

## LOCOMOTIVES, COACHES AND CARS

of all descriptions.

**F. M. HICKS,**  
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## LOCOMOTIVES STEAM SHOVELS CARS

20-25 tons, Flats and Boxes.  
80-3 yard, 2 way dumps.

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## Five Blowing Engines.

36" Steam Cylinder, 84" Air Cylinder, 54" Stroke.  
Engines were built by Cuyahoga Engine Works and can be seen in operation at our plant at Columbus, Ohio. Can be delivered about Nov. 1st.

**The Columbus Iron & Steel Co.**  
COLUMBUS, OHIO.

## LOCOMOTIVES.

50-ton Freight and Switch Engines  
for prompt delivery.

RAILS AND CARS.

**MAY & SPALDING,**  
ATLANTA, GA.

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Four (4) 18"x22" Cylinder Baldwin, ten-wheel Freight Standard Gauge Locomotives, weight about 42 tons; six drivers, 50" diameter; separate eight-wheel tender.  
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Twenty (20) Flat Cars, 30' long, 20 tons, capacity, Diamond Trucks, M. C. B. Automatic Couplers, hand brakes.  
Twelve (12) Coaches, 51' over all; carry 54 passengers; good coaches; cheap.  
Two (2) Baggage Cars, same length; carry 28 passengers; all equipped with Westinghouse Air Brakes.

**NEW YORK EQUIPMENT COMPANY,**  
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 ERIE CITY IRON WORKS, Engines and Boilers.  
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18"x42" Hewes & Phillip's right-hand Corliss engine, wheel in 1/8, 14"x38" face. Berryman Heater, Jack shaft, etc., low price, gilt edged condition.

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**Wheels and Axles**  
 FOR SALE, CHEAP.

20 pair 5 ft. Archibald Wheels (iron hub) with steel axles, all new. These are VERY SUITABLE for MAKING TRUCKS or DOLLIES for HANDLING PILES, POLES, TIMBER, etc. A bargain for any such purpose. For full description address  
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36" Gauge Equipment.  
 3 Locomotives, Mogul Type, in good condition, one 12"x16" Cylinder and two 13"x18" Builder, H. K. Porter. A lot of Box Cars. All for delivery in June or July.  
 3 Passenger Coaches.  
 1 Combination Baggage and Passenger Coach. Immediate Delivery.

Standard Gauge.  
 We also offer, for immediate delivery, second-hand standard gauge Locomotives from 13" to 18" cylinders, American and 10-Wheel Type. Relaying Rails.

SAVANNAH LOCOMOTIVE WORKS  
 & SUPPLY COMPANY,  
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**FOR SALE.**  
**New Steel Tee Rails**

60 to 80 lb. A. S. C. E. section.  
 Delivery guaranteed.  
 RAILWAYS BUILT and FINANCED.  
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**FOR SALE.**  
 Two hundred and fifty tons of new forties; two hundred and fifty tons new thirties; one 16" cyl. Roger Locomotive, good condition; one 15" cyl. Baldwin Locomotive, good condition; one 15-ton stand. gauge Locomotive, for wood or iron rails; two 28-ton 14" cyl. stand. gauge Locomotive, fine condition. Apply  
 SABEL BROTHERS,  
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**NEW STEEL RAILS.**

We have a large quantity of steel, A. S. C. E. section, various weights, with or without fastenings, for immediate or future delivery. Also have "seconds" for sale.  
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**RAILS—LOCOMOTIVES.**

400 tons 35 and 40-lb. steel relay rails.  
 Locomotives—Narrow and standard gauge. 50 locomotives on hand.  
 Southern Iron and Equipment Co.  
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**FOR SALE.**  
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12, 16, 20, 30, 35 and 40 lbs., with splice bars, bolts and spikes. Immediate shipment from stock.  
 JOHN J. HAMEL & CO.  
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**FOR SALE CHEAP.**  
 Six Standard Gauge Locomotives.  
 In good condition. Weight on drivers 25 tons.  
 CAINE & PLITT,  
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**Plow Handle**  
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 Write for Circular and Prices.  
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Advertisements under this head will be inserted at the rate of one cent a word for each insertion.

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BECAUSE of its Simple, Frictionless Mechanism.  
 BECAUSE of its Complete Keyboard.  
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 BECAUSE of its Perfect Work.  
 BECAUSE of its Durability.

Catalogue Sent Free.

**The Smith Premier  
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**Turpentine Stills,  
 And General Metal Workers.**

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 Fayetteville, N. C.  
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 McMILLAN BROS. COMPANY,  
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 Mfg's of

**Nearly as Good as New.**

	Cost	Price
Drilling Machines, Barnes, No. 20.....	\$60.00	\$45
Blower, No. 3, Pressure .....	22.50	15
Grinding Machine, B, Standard .....	30.80	23
Grindstone, power, 30-in.....	25.50	18
Motor, Sprague, 2-H.P., 500 volts.....	117.00	90
Motor, Sprague, 4-H.P., 500 volts.....	162.00	125
Pumping Jack, Hill, geared. ....	20.00	15
Rope Drive and Countershaft .....	38.00	25
Steel Balls, 1 inch, 96.....	6.63	2

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**Alabama Frog & Switch Co.**

ANNISTON, ALA.

Manufacturers of

**Railroad Crossings, Frogs,**

Switches, Switch Stands, Rail Braces, Etc.

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Every issue of the magazine is beautifully illustrated and contains one hundred and twenty or more pages, each one of which is of human interest.

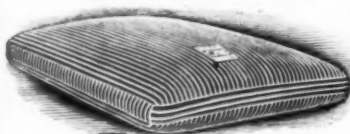
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Single Copies 5 Cents, or 50 Cents a Year.

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GEORGE H. DANIELS, Publisher,  
 Room 195, 7 East 42d Street, New York.

**For \$9.50 Cash**



**YOU**

can purchase a full size

**Original Perfection  
 Mattress**

GUARANTEED to be better than a \$50 Hair Mattress. MONEY BACK after sixty nights' trial if not entirely satisfactory.

This Superior Mattress is used as a STANDARD by the Baltimore City Fire Department.

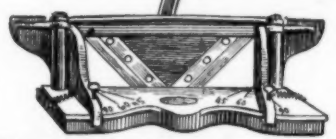
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Manufactured by

**Perfection Mattress Co.**

Birmingham, Ala., (Home Office) 1602-10 First Ave.  
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**Wood-Workers' Bench Trimmers**



**Saves time—**

A Single motion cuts a Saratoga chip or a thick one with perfect accuracy. Pattern-makers, Picture Frame and Cabinet makers can't afford to be without one on each work bench.

**Only \$15.00** Each, while they last. Cash with order.

**Carlin Machinery Supply Co.**

Lacock and Sandusky Sts., ALLEGHENY, PA.

**WE WANT TO REPRESENT  
 MANUFACTURERS**

for all classes of machinery and building material for this immediate vicinity and for the Southern States, and solicit your account as distributing agents.

A good opportunity is offered by us to make quick sales. Address

**J. J. ROBERTS & CO.**

NEWPORT NEWS, VA.

**For \$25.00**

You can procure

**A List Every Day**

for one year of new companies  
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**Wanting  
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Will send you a sample if you  
 want it.

**MANUFACTURERS' RECORD,**  
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**BOSTON & MAINE  
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**Lowest Rates.**

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BETWEEN

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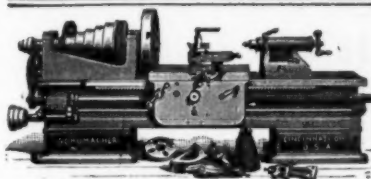
St. Louis, St. Paul, Minneapolis and  
 all points West, Northwest, Southwest.

**Pullman Parlor or Sleeping Cars on All  
 Through Trains.**

For tickets and information apply at any  
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**D. J. FLANDERS,**  
 Gen'l Pass. & Tkt. Agt.,  
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## SCHUMACHER & BOYE, Engine Lathes, Cincinnati, Ohio.



## Tools for Sheet Metal.

TINSMITHS' and ROOFERS' TOOLS,  
PRESSES and DIES,  
SHEARING MACHINES,  
ROLLS, PUNCHES,

Made by the

Niagara Machine & Tool Works,  
BUFFALO, N. Y.

Write for Catalogue M.

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**MACHINERY**  
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### Ready for Immediate Shipment.

We have the following new tools in stock ready for immediate shipment to any part of the country.

Two 38 in. x 20 ft. New Haven Engine Lathes.  
One No. 4 Brown & Sharpe Universal Milling Machine.  
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One 26 in. x 48 in. x 16 ft. McCabe Double Spindle New Style Engine Lathe with Geared Face Plates.  
One 24 in. x 16 ft. Draper Engine Lathe with Triple Gears and T. A.  
One 28 in. x 16 ft. Draper Engine Lathe with Triple Gears, C. R. and T. A.

All Kinds of Machine Tools and Machinery Supplies.

Write today for our Catalogue.

**BAIRD MACHINERY CO.**

121-125 Water Street,

PITTSBURG, PA.

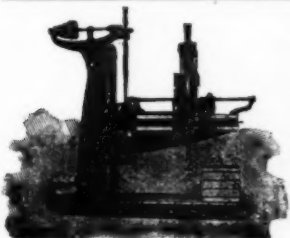


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We Make a Specialty of Contract Work for  
Light, Accurate Machinery.

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We have Complete Equipment for Surface and Universal Grinding.



## RADIAL DRILLS, HORIZONTAL DRILLING BORING and MILLING MACHINES,

With every up-to-date feature embodied in their construction.

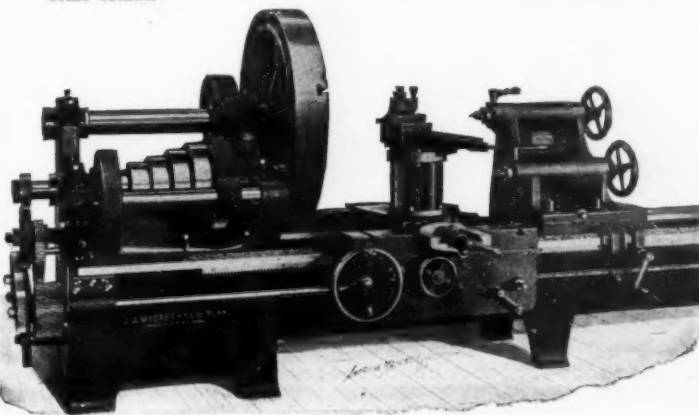
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CINCINNATI, OHIO.

## I Make a Lathe

that occupies the space of an ordinary lathe, costs the price of an ordinary lathe, and yet does the work that otherwise requires two ordinary lathes. This lathe is my new 28"-48" Double Spindle Lathe. It will handle all your heavy jobs on the 48" spindle, and then, without any bother whatever, you put your small work on the 28" spindle, and it handles it not in a "good enough" way, but just as good as though the lathe was built for that one size of work. Some improvements that I've made have increased the power 25 per cent. I've put the back gears in front, and now use a larger intermediate gear in driving the large spindle. There isn't any improvement in modern lathe design that I haven't made use of in this one, and that's why I think we could get together on the lathe question with mutual profit. Let me send you some details.



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MACHINERY and SUPPLIES.

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A line of good, reliable tools.

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Try The B-L Co. Anti-Friction Babbitt.

## CHAS. LEFFLER & CO.

49-51 Clymer Street,

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PRESSES, DIES AND TOOLS  
FOR TIN CANS AND BOXES.

For  
HYDRAULIC  
TOOLS

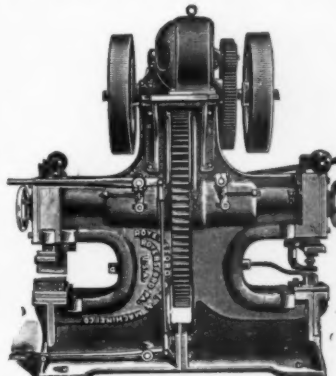
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WATSON-STILLMAN CO.  
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JACKS  
PUMPS  
PRESSES  
RIVETERS  
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NEW YORK.

## Royersford Punch and Shears

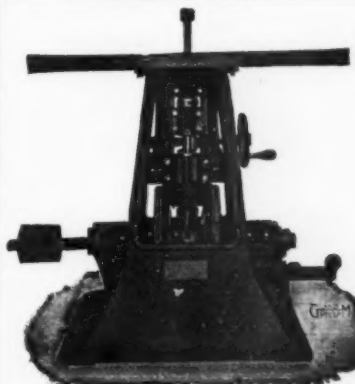
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Adapted for Structural Plants, Railroad Shops, Car Builders, Wagon Works, Machine and Blacksmith Shops. Built right. Honestly rated. Are money makers. Ask for catalogue.

Royersford Foundry & Machine Co.

Royersford, Pa., U. S. A.



Single Spindle Reversible Shaper.

Single and Double Spindle Shapers, Combination Shaper and Carver, Cutter Heads, Wing Cutters, etc. Designers of Special Machinery.

Moshannon Manufacturing Co.  
PHILIPSBURG, PENNA.

## Drilling Truths of "The New Bickford Radial"

We do not punch holes, nor do we run the tools at excessive speeds. We merely take advantage of every known means to augment production.

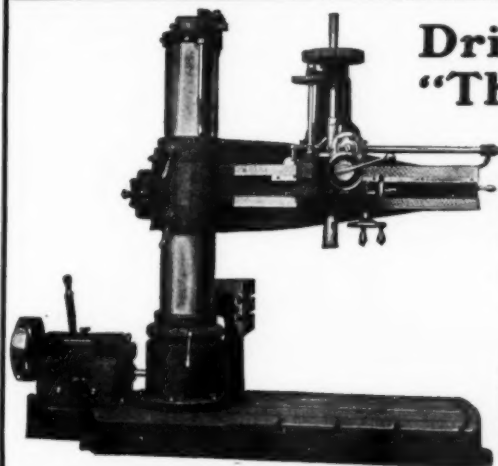
When compared with other Radials, this machine has twice as many speeds, and from two to four times as many feeds.

Our drill embodies everything that modern practice has shown to be essential to the rapid production of true work.

Our little book, "36 Points of Vantage" will help convince you of these truths. Send for it.

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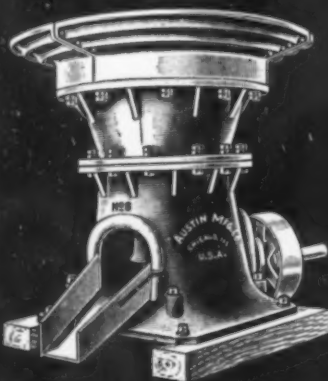
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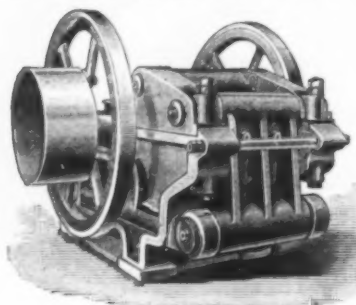


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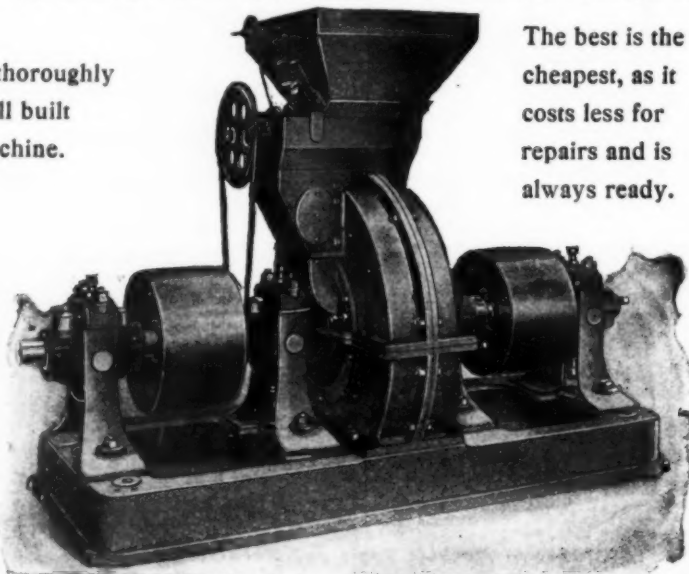
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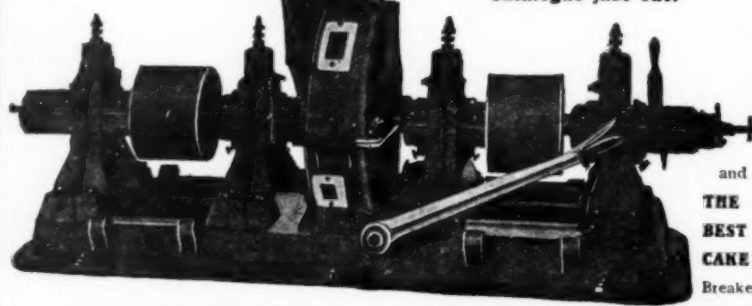
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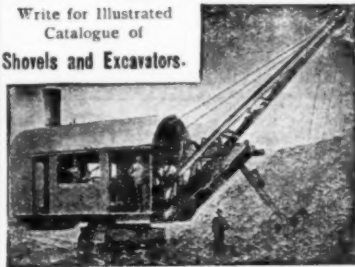
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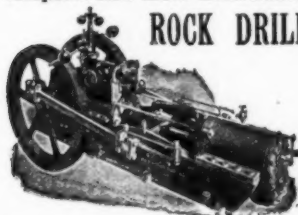
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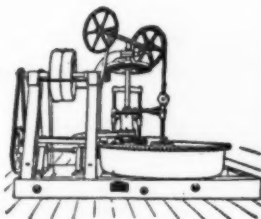
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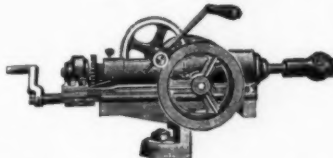
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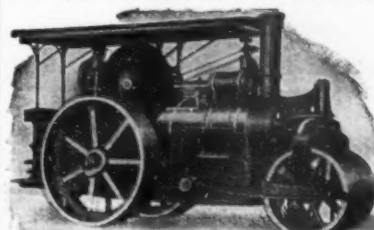
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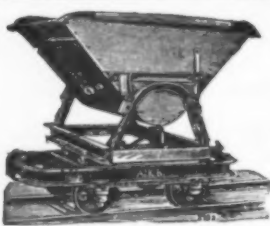
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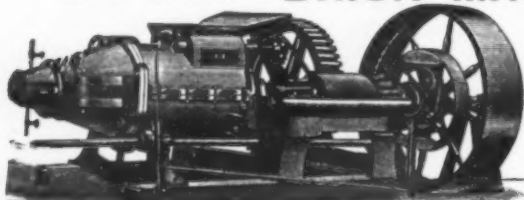
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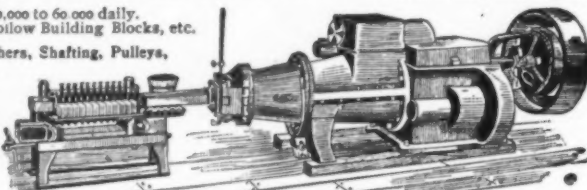
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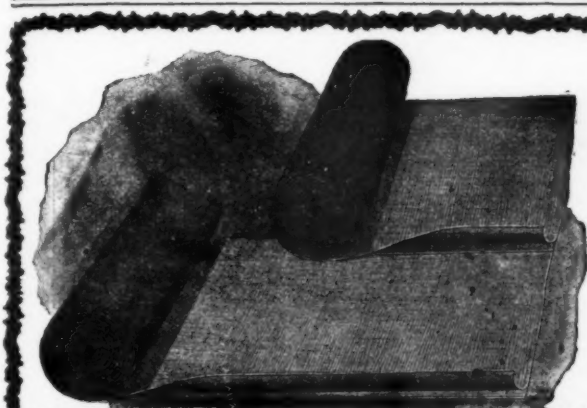
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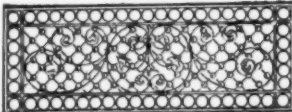
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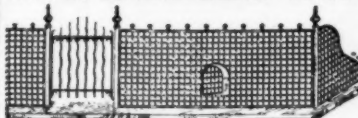
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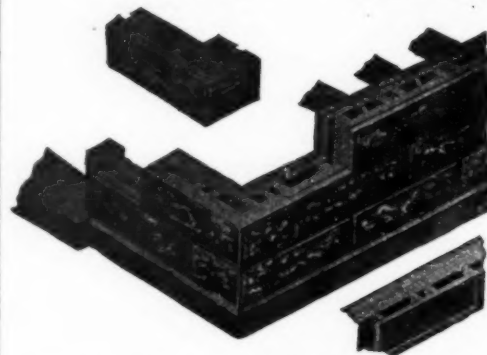
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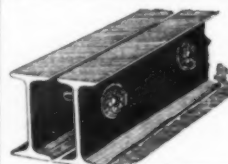
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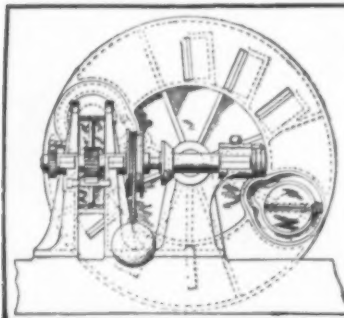


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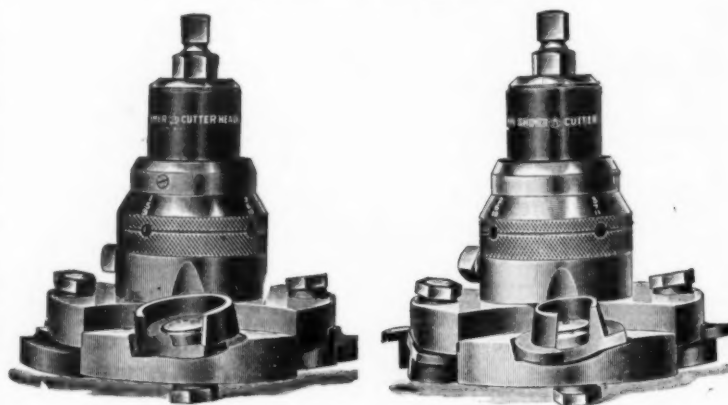


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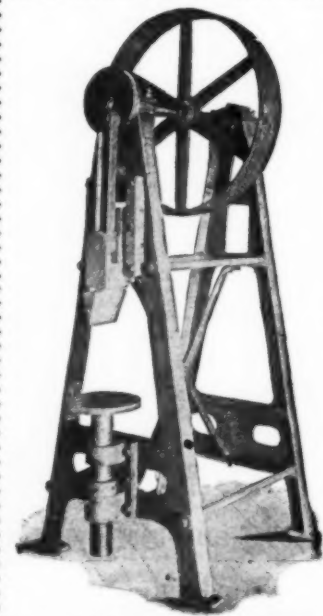
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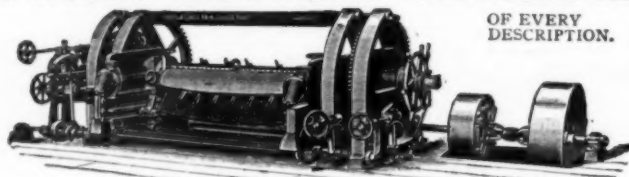
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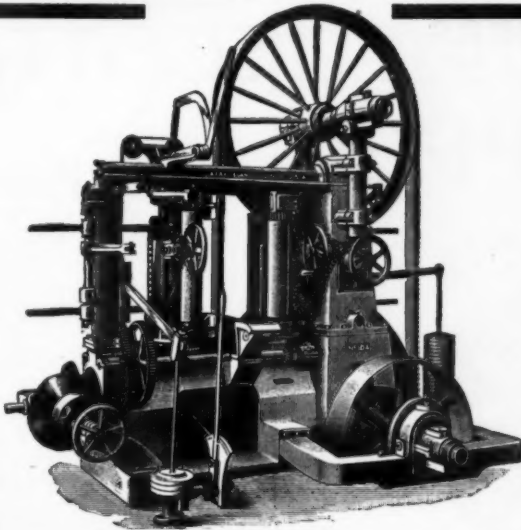
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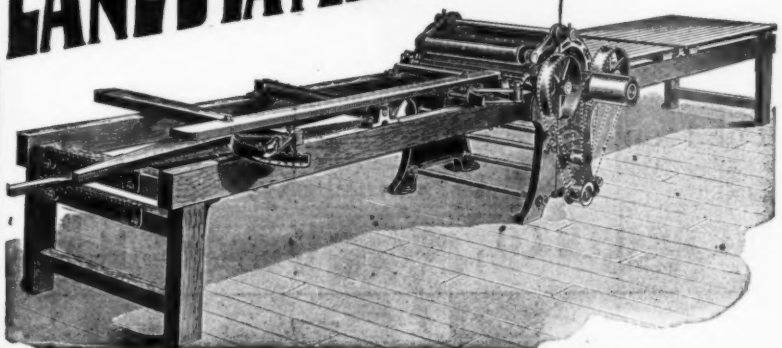
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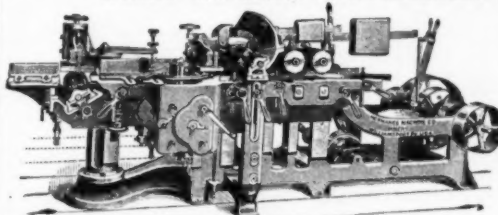
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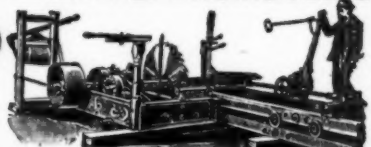
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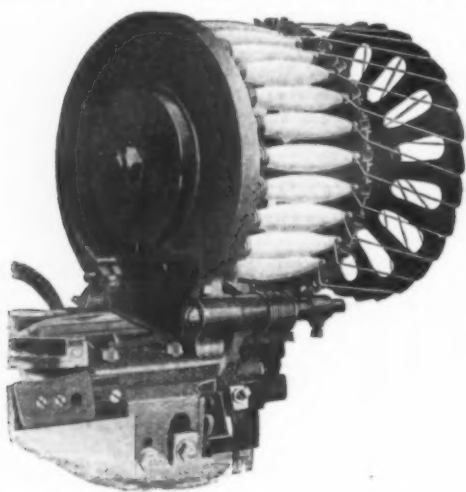
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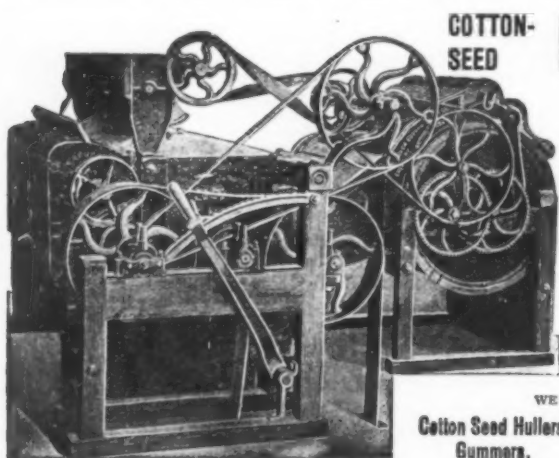
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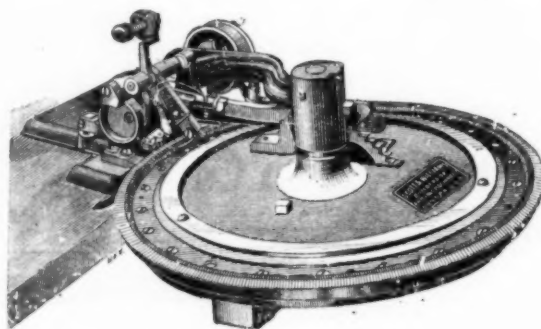
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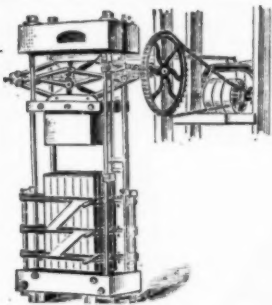


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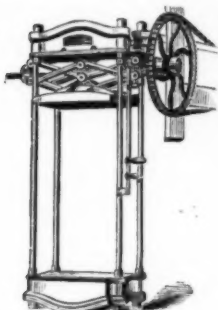
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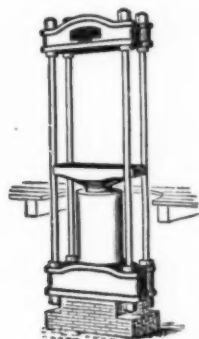
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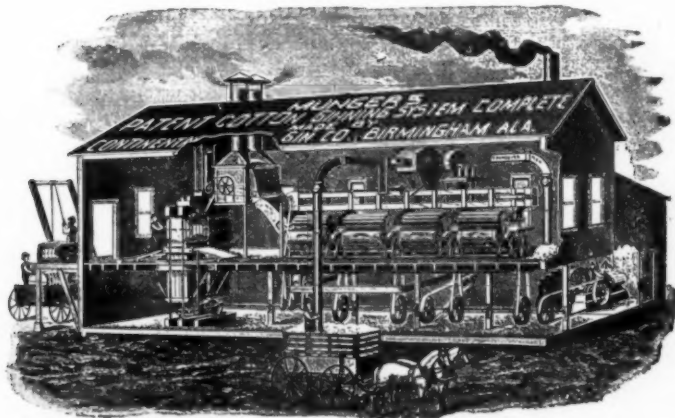
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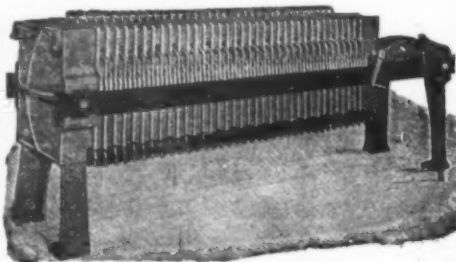
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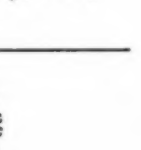
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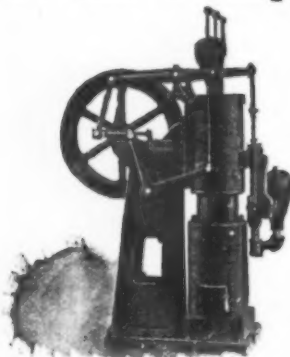
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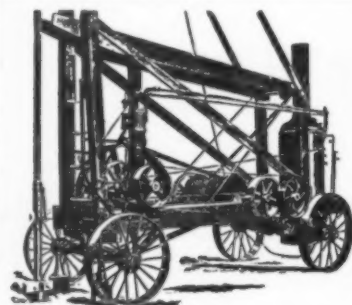
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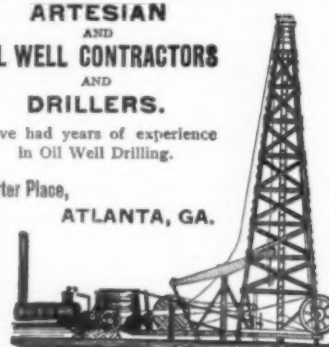
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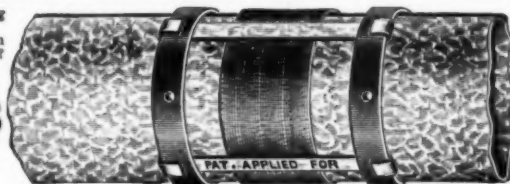
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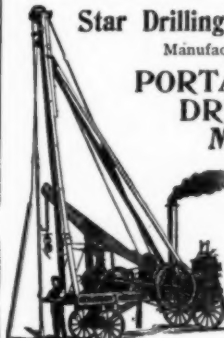
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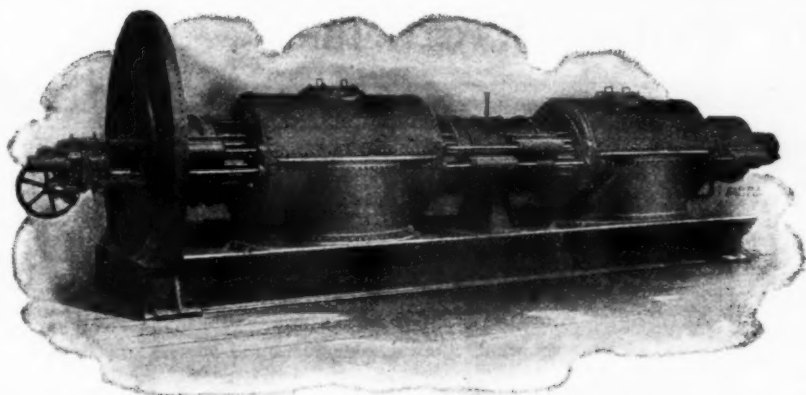
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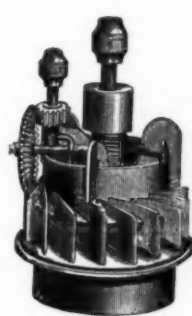
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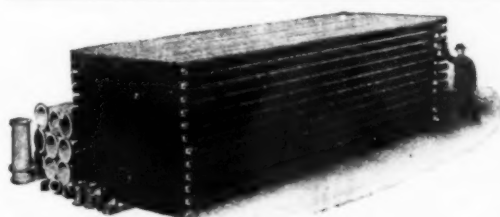
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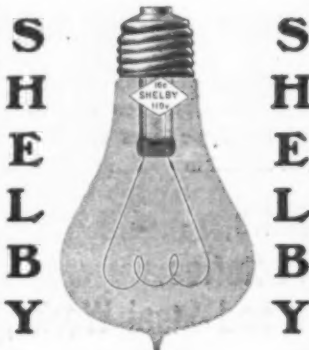
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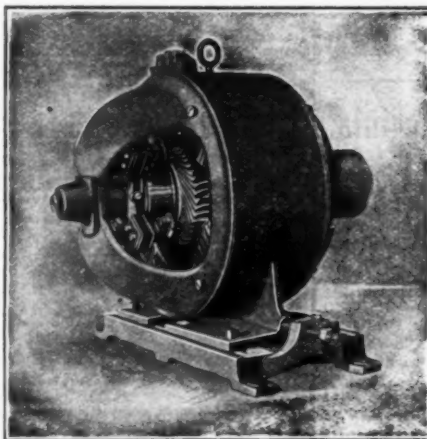
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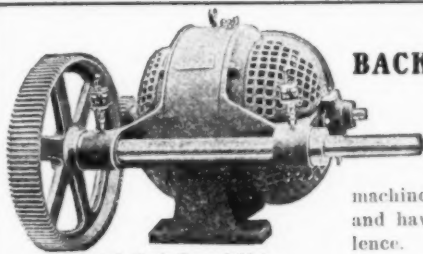
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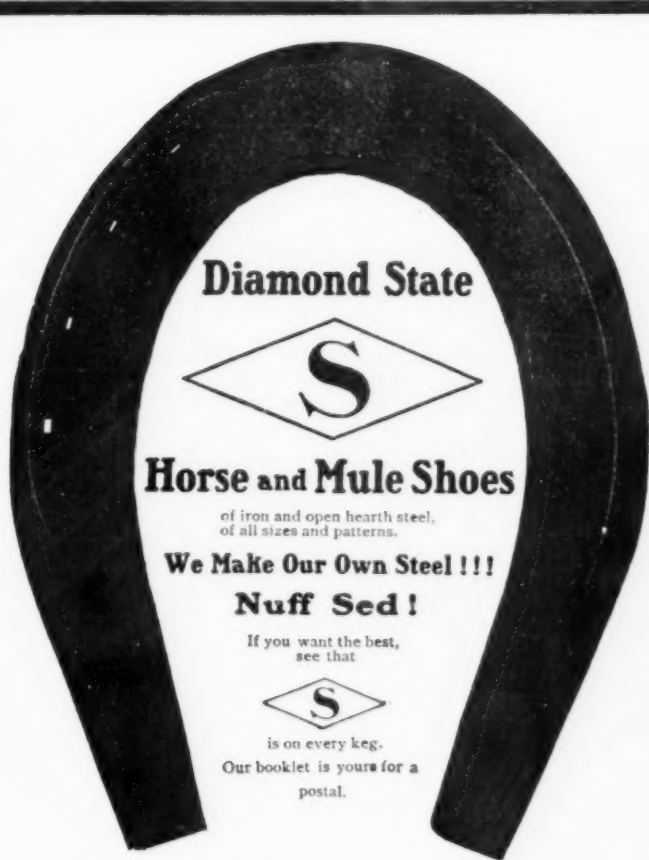
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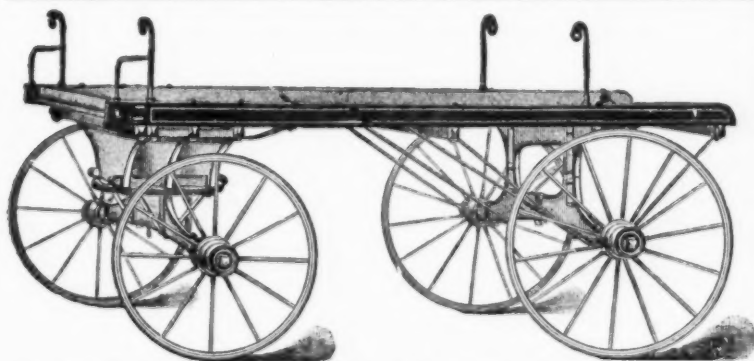
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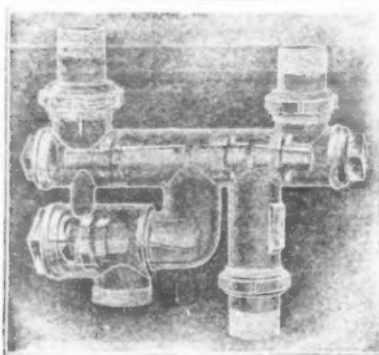
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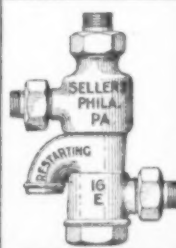
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